



BRISTOL BAY SOCKEYE SALMON (Oncorhynchus nerka) 1969

A Compilation of Catch and Escapement Data

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ADF&G TECHNICAL DATA REPORTS

This series of reports is designed to facilitate prompt reporting of data from studies conducted by the Alaska Department of Fish and Game, especially studies which may be of direct and immediate interest to scientists of other agencies.

The primary purpose of these reports is presentation of data. Description of programs and data collection methods is included only to the extent required for interpretation of the data. Analysis is generally limited to that necessary for clarification of data collection methods and interpretation of the basic data. No attempt is made in these reports to present analysis of the data relative to its ultimate or intended use.

Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revisions will be made via errata sheets. Major revisions will be made in the form of revised reports.

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INTRODUCTION

This publication is the seventh in a series intended to annually present catch and escapement statistics for the Bristol Bay sockeye salmon fishery.

Personnel of the Alaska Department of Fish and Game's Commercial Fisheries Division collected and analyzed all data. Personnel of the Commercial Fisheries Division, Management and Research Sections of the Alaska Department of Fish and Game and the Department of Administration Data Processing Division furnished all the data tabulations. Scientists participating in the tabulation and analysis of these data includes: Mr. Mike McCurdy, Mr. Robert Paulus, Mr. Michael Nelson, Mr. Mel Seibel, Mr. Darwin Biwer, and Mr. Steven Pennoyer. Many additional personnel also participated in the collection and preliminary tabulation of these data. Mrs. Diane King, Mrs. Sue Bevel, Mrs. Penny Locke, and Miss LaJuana Klinger served as typists for the final report. Messrs. Robert Paulus and Mike McCurdy compiled the data tables and figures, and Mr. Mike Nelson provided the district text. Robert Paulus assembled and edited this material, with Mike Nelson providing final editing.

METHODS AND MATERIALS

These data were collected by field crews stationed at counting towers and at selected canneries throughout the Bristol Bay area. Figure 1 shows the relative location of the various sampling stations.

Statistical analysis of the absolute error incurred in the estimation of the proportion of a given age class in a population of the magnitude encountered in Bristol Bay indicated that a minimum sample size of 150-200 fish per time period was required. Sampling requirements are set separately for the two sexes since considerable difference exists between the age composition of male and female sockeye salmon, particularly in the commercial catch. Therefore, a sample size of 400 fish per time period was required. A sample size requirement of 600 fish per time period was set to take into account imbalances in the sex ratio, illegible or missing scales and the sampling of species other than sockeye salmon. The time periods were set as a fishing period for the commercial catch and, if fish were available for full samples, three days for the escapement. The successive periods were grouped to acquire the required minimum number of fish per sex if a lack of fish in a single period did not allow the attainment of this goal.

Escapement counts and samples of the fish in the escapement were obtained for ten of the sockeye salmon spawning systems in Bristol Bay accounting for over 90 percent of the known spawning escapement. The systems sampled were Ugashik, Egegik, Naknek, Branch, Kvichak, Igushik, Wood, Nushagak, Nuyakuk, and Togiak. In addition, aerial surveys were conducted to obtain estimates of the sockeye salmon escapements to the Snake and Kulukak Rivers, and the Togiak tributaries. Escapement counts were made from elevated towers (either mounted in boats or on the shore) located along the banks of the rivers. Counts were made for ten minutes each hour on each side of the river and then were multiplied by six to obtain hourly estimates and summed to obtain daily estimates.

Escapement sampling was carried out daily when possible. Crews used beach seines for capture gear and attempted to obtain approximately 200 fish per day. Sex determination, length measurement and a scale for age determination were obtained from all fish captured. At times the sampling effort fell below the desired level, mainly due to poor weather and lack of migrating salmon.

Catch figures given herein are final catch figures tabulated from punch cards obtained from fish ticket receipts. Chum salmon, which are mixed with the sockeye salmon catch on many of the fish ticket receipts, were deducted from the total catch by district and by period to yield a final sockeye salmon catch. Percentages of chum salmon in the catch for the Naknek-Kvichak, Egegik, and Ugashik districts were obtained through combinations of random catch sampling and cannery catch reports.

A different system is used for the Nushagak and Togiak districts due to the greater number of chums in the catch. In the Nushagak district, species are separated in the set net and drift skiff catch so the actual fish ticket figures are used. Chum percentage in the boat drift net catch is derived by averaging the chum percentages by period reported by the two largest canneries in the district. In the Togiak district, species were separated on the fish tickets.

The catch was sampled at five locations throughout the Bay. The sampler at the Alaska Packers Association NN plant sampled the Egegik catch and one-half the required sample from from the Ugashik catch. The sampler at the Red Salmon cannery at Naknek sampled the Naknek-Kvichak catch and one-half the required sample from the Ugashik catch. Igushik and Nushagak catches were sampled at the Columbia Wards Fisheries Ekuk plant. Miscellaneous samples from the Nushagak

district were taken at the Pacific Alaska Fisheries cannery at Dillingham. The Togiak district catch was sampled at the Togiak Fisheries cannery at Togiak.

The cannery fish samples were taken by selecting fish randomly from the conveyor belts as the salmon moved into the cannery storage bins. With the exception of the Togiak district, fish were taken from the belt without regard to species (sockeye or chum) and placed in specially constructed sampling bins to facilitate the taking of data. In the Nushagak district, chums were removed from the sampling bins, counted and returned to the belt. In the Ugashik, Egegik, and Naknek-Kvichak districts, both chums and sockeyes were sampled and separated later on the basis of scale analysis. In the Togiak district, the different species were sampled separately.

The samplers were instructed to obtain a sample of 600 fish per district per fishing period. They were instructed to obtain a 120 fish sample for each additional day or portion thereof. In the case of periods being extended more than five days total or if the 600 fish sample was taken prior to any extension. Samplers were instructed to spread their period sample over as many scow loads as possible to insure a representative sampling of the catch. A maximum sample of 200 fish per scow load was set. Set net catch deliveries were sampled as time allowed, but, except in the Nushagak, primary importance was attached to sampling the drift net catch on the scows since it represents the largest proportion of the total catch. Also, the drift catch is thought to be more representative of the catch as a whole since it is not restricted to any one part of a fishing district. In the following catch tables the "numbers of samples" refers to the number of different scow loads, or truck loads of fish sampled each fishing period. In the escapement "number of samples" refers to the number of days sampled.

Weights, lengths, and scales were taken from 150 fish of each sex during the peak of the catch in each district. Also, length, sex, and a scale were taken from every fish sampled in both catch and escapement.

Data for the north side of the Alaska Peninsula were collected by Alaska Department of Fish and Game personnel stationed at Cold Bay.

In this report, remarks appropriate to each district are included with the data for that district. A map of each fishing district is also included.

Age designation used throughout this paper is the Gilbert-

Rich notation instead of the European.

<u>Gilbert-Rich</u>	<u>European</u>	
3_2	1.1	One winter in freshwater, one winter in ocean, in third year.
4_3	2.1	Two winters in freshwater, one winter in ocean, in fourth year.
5_4	3.1	Three winters in freshwater, one winter in ocean, in fifth year.
3_1	0.2	No winter in freshwater, two winters in ocean, in third year.
4_2	1.2	One winter in freshwater, two winters in ocean, in fourth year.
5_3	2.2	Two winters in freshwater, two winters in ocean, in fifth year.
6_4	3.2	Three years in freshwater, two winters in ocean, in sixth year.
4_1	0.3	No winters in freshwater, three winters in ocean, in fourth year.
5_2	1.3	One winter in freshwater, three winters in ocean, in fifth year.
6_3	2.3	Two winters in freshwater, three winters in ocean, in sixth year.
7_4	3.3	Three winters in freshwater, three winters in ocean, in seventh year.
6_2	1.4	One winter in freshwater, four winters in ocean, in sixth year.
7_3	2.4	Two winters in freshwater, four winters in ocean, in seventh year.

It is the purpose of this report to present these statistics in a form which will serve the needs of scientists concerned with this fishery.

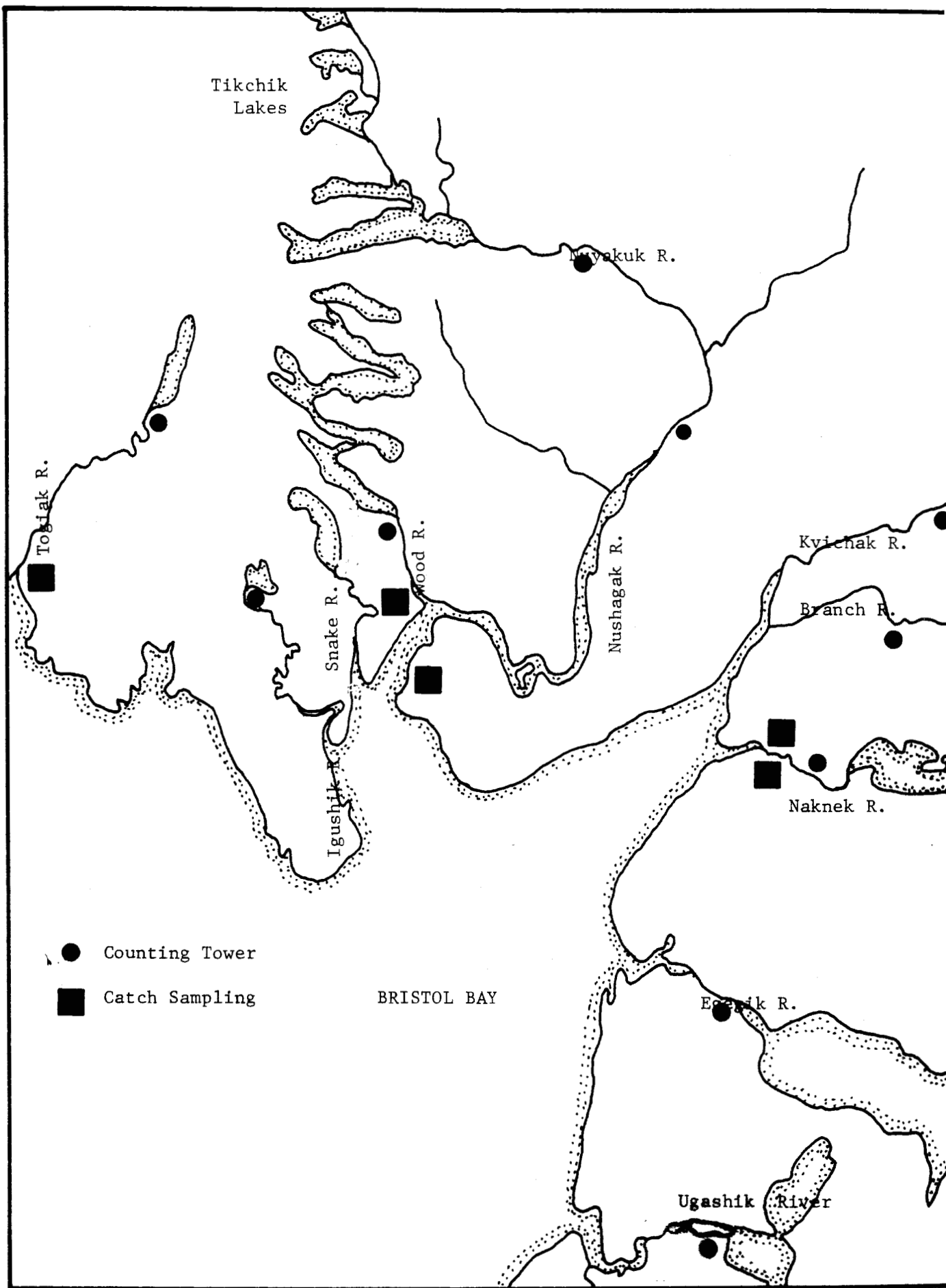


Figure 1. Approximate locations of catch sampling and counting towers, Bristol Bay, 1969

Table 1. Bristol Bay sockeye salmon inshore return, 1969.

System	Catch	Escapement	Total Return
Kvichak River	3,760,565	8,394,204	12,154,769
Branch River	90,617	182,490	273,107
Naknek River	803,890	1,331,202	2,135,092
Total Naknek-Kvichak District	4,655,072	9,907,896	14,562,968
Egegik River <u>3/</u>	889,322	1,015,554	1,904,876
Ugashik River	169,845	160,380	330,225
Wood River	452,037	604,338	1,056,375
Igushik River	239,226	512,328	751,554
Snake River	-	9,300 ^{1/}	9,300
Nuyakuk River	59,636	69,828	129,464
Nushagak-Mulchatna	22,308	16,792	39,100
Total Nushagak-Igushik District	773,207	1,212,586	1,985,793
Togiak River	-	109,266	-
Togiak Tributaries	-	7,400 ^{1/}	-
Kulukak system ^{2/}	-	8,400	-
Total Togiak District	134,252	125,066	259,318
Total Bristol Bay	6,621,698	12,421,482	19,043,180

^{1/} Escapement estimated from aerial surveys of spawning grounds

^{2/} Catch from this system included in Togiak catch.

^{3/} Mother Goose Lake escapement not included

Table 2. 1969 Bristol Bay sockeye salmon catch by district and fishing period and units of gear fishing.

Date and Time		Hours	Units of Gear		Sockeye Salmon	
			Drift	Set	Catch	
Naknek-Kvichak District <u>1/</u>						
June 16	9 am - June 21	9 am	120	2	-	808
June 23	5 am - June 24	5 am	24	38	17	7,810
June 25	6 am - June 26	6 am	24	105	35	49,269
June 27	8 am - June 28	8 am	24	257	59	331,432
June 29	9 am - June 29	9 pm	12	259	60	440,015
July 1	11 am - July 2	11 pm	12	18	11	21,343
July 1	11 pm - July 2	11 am	12 <u>2/</u>	-	-	-
July 3	1 am - July 3	1 pm	12 <u>3/</u>	957	215	1,584,608
July 5	3 am - July 5	3 pm	12	900	187	385,565
July 7	5 pm - July 8	5 am	12	1,162	282	1,697,318
July 8	5 am - July 19	9 am	268	582	162	106,380
July 21	9 am - July 26	9 am	120	46	48	17,785
July 28	9 am - Aug. 2	9 am	120	10	32	2,465
Aug. 4	9 am - Aug. 9	9 am	120	-	10	262
Aug. 11	9 am -	-	-	4	-	922
Total =					4,655,072	

1/ The fishery was not affected seriously by the fishermen-industry price dispute.

2/ Open period rescinded by the Governor's Task Force.

3/ Naknek section open until further notice effective 1 p.m. July 3.

Egegik District <u>1/</u>								
June 2	9 am	-	June 7	9 am	120	10	3	4,672
June 9	9 am	-	June 14	9 am	120	2	4	330
June 16	9 am	-	June 21	9 am	120	23	50	3,618
June 23	4 am	-	June 24	4 am	24	79	68	29,437
June 25	5 am	-	June 26	5 am	24	106	79	49,677
June 27	7 am	-	June 28	7 am	24	157	88	40,818
June 29	7 am	-	June 29	7 pm	12	170	100	218,010
July 1	10 am	-	July 1	10 pm	12	232	102	256,055
July 7	4 am	-	July 7	4 pm	12	208	145	227,761
July 7	4 pm	-	July 19	9 am	281	39	60	8,256
July 21	9 am	-	July 26	9 am	120	1	3	508
July 28	9 am	-	Aug. 2	9 am	120	-	1	154
Aug. 4	9 am	-	Aug. 9	9 am	120	2	5	21
Aug. 11	9 am	-	Aug. 16	9 am	120	4	10	5
								839,322

1/ The fishery was not affected seriously by the fishermen-industry price dispute.

Table 2. 1969 Bristol Bay sockeye salmon catch by district and fishing period and units of gear fishing. (continued)

Date and Time		Hours	Units of Gear		Sockeye Salmon	
			Drift	Set	Catch	
Ugashik District						
June 9	9 am - June 14	9 am	120	10	-	4
June 16	9 am - June 21	9 am	120	16	4	285
June 23	4 2m - June 24	4 am	24	14	4	1,477
June 25	5 am - June 26	5 am	24	5	11	1,504
June 27	7 am - June 28	7 am	24	9	15	5,516
June 29	8 am - June 30	8 am	24 ^{1/}	-	-	-
July 1	10 am - July 2	10 am	24	35	16	40,712
July 3	1 pm - July 4	1 pm	24	47	12	44,787
July 5	3 pm - July 6	3 pm	24	50	13	42,818
July 8	7 pm - July 9	7 am	12	49	15	17,052
July 12	8 am - July 12	8 pm	12	46	12	11,004
July 21	9 am - July 26	9 am	120	25	18	4,405
July 28	9 am - Aug. 2	9 am	120	2	6	268
Aug. 4	9 am - Aug. 9	9 am	120 ^{2/}	-	-	-
Aug. 11	9 am - Aug. 16	9 am	120	9	12	5
Aug. 25	9 am - Aug. 30	9 am	120	12	15	5
Sept. 1	9 am -	-	-	17	8	3
Total =					169,845	

^{1/} No fishing due to strike conditions and processing difficulties, the balance of the season was not affected by the fishermen-industry price dispute.

^{2/} No commercial harvest.

Nushagak and Igushik Sections^{1/}

June 9	9 am - June 14	9 am	120	200	1	139
June 16	2 pm - June 17	2 pm	24	217	3	31
June 19	3 pm - June 20	3 pm	24	236	2	143
June 23	6 am - June 24	6 am	24	6	-	7
June 25	7 am - June 26	7 am	24	14	1	1,199
June 27	9 am - June 28	9 am	24	17	6	957
June 29	10 am - June 29	10 pm	12	5	4	131
July 1	12 n - July 1	12 mn	12	10	8	9,483
July 3	3 pm - July 4	3 pm	24	358	99	393,706
July 5	- Aug. 8		79 ^{2/}	320	1	115,429
July 9	8 am - July 11	8 am	48	395	104	159,506
July 12	8 am - July 14	8 am	48	317	130	81,190
July 16	12 n - July 19	9 am	69	272	107	6,524
July 21	9 am - July 26	9 am	120	186	71	4,260
July 28	9 am - Aug. 2	9 am	120	103	38	379
Aug. 4	9 am - Aug. 9	9 am	120	90	39	61
Aug. 11	9 am - Aug. 16	9 am	120	37	34	50
Aug. 18	9 am - Aug. 23	9 am	120	17	11	12
Total =						773,207

^{1/} The fishermen-industry price dispute severely affected the commercial harvest between June 20 and July 3.

^{2/} Igushik section only.

Table 2. 1969 Bristol Bay sockeye salmon catch by district and fishing period and units of gear fishing. (continued)

Date and Time	Hours ^{1/}	Units of Gear Drift	Set	Sockeye Salmon Catch
Togiak District ^{2/}				
June 16 9 am - June 21 9 am	120	43	0	170
June 23 9 am - June 28 9 am	120	62	0	5,088
June 30 9 am - July 5 9 am	120	77	0	33,952
July 7 9 am - July 12 9 am	120 ^{3/}	94	2	28,503
July 14 9 am - July 19 9 am	120	58	3	40,959
July 21 9 am - July 26 9 am	120	65	2	17,298
July 28 9 am - Aug. 2 9 am	120	57	1	6,540
Aug. 4 9 am - Aug. 9 9 am	120	50	0	1,048
Aug. 11 9 am - Aug. 16 9 am	120	42	0	459
Aug. 18 9 am - Aug. 23 9 am	120	42	0	127
Aug. 25 9 am - Aug. 30 9 am	120	75	2	84
Sept. 1 9 am - Sept. 6 9 am	120	44	0	24
Total =				134,252

^{1/} Osviak and Kulukak sections were open five days per week, while the Togiak River section was open four days per week. The fishermen-industry price dispute did not affect the Togiak fishery.

^{2/} Includes 1,226 Osviak sockeye and 3,411 Kulukak sockeye.

^{3/} Togiak River section closed two additional days to assure adequate escapement.

TABLE 3. 1969 Bristol Bay sockeye salmon return by age group, by river system.

River	Age Group					
	3_1	3_2	4_1	4_2	4_3	5_2
Kvichak	3,036	10,931	-	9,032,233	483,931	246,139
Branch	56	13,180	-	95,057	568	59,361
Naknek	433	4,425	-	494,612	44,277	159,775
Egegik	-	-	-	95,123	34,865	41,558
Ugashik	521	338	-	78,383	1,541	9,918
Wood	-	6,728	2,608	464,330	510	255,962
Igushik	-	-	943	301,343	-	299,676
Snake	-	-	-	4,094	-	2,079
Nuyakuk	652	-	4,449	71,759	-	36,904
Nushagak- Mulchatna	1,973	73	8,567	16,206	-	9,054
Togiak	878	-	1,087	138,451	25	50,710
Total Bay	7,549	35,675	17,654	10,791,591	565,717	1,171,136

(Continued)

Table 3. 1969 Bristol Bay sockeye salmon return by age group, by river system
(continued).

5_3	5_4	6_2	Age Group		7_4	Total
			6_3	6_4		
2,150,177	-	-	222,962	2,915	2,445	12,154,769
103,869	-	-	889	74	53	273,107
1,042,482	-	-	382,228	6,471	389	2,135,092
1,335,120	1,023	541	308,617	69,694	18,335	1,904,876
225,303	-	108	13,826	179	108	330,225
297,890	-	-	28,347	-	-	1,056,375
134,829	-	-	14,763	-	-	751,554
2,878	-	-	249	-	-	9,300
12,095	-	-	3,605	-	-	129,464
1,900	-	74	1,253	-	-	39,100
37,411	-	54	14,848	54	-	243,518
5,343,954	1,023	777	991,587	79,387	21,330	19,027,380

Table 4. 1969 Bristol Bay sockeye salmon return percent by age class by system.

River	Age group												Total
	3 ₁	3 ₂	4 ₁	4 ₂	4 ₃	5 ₂	5 ₃	5 ₄	6 ₂	6 ₃	6 ₄	7 ₄	
Kvichak	0.02	0.09	-	74.31	3.98	2.03	17.69	-	-	1.84	0.02	0.02	100.00
Branch	0.02	4.83	-	34.81	0.21	21.73	38.03	-	-	0.32	0.03	0.02	100.00
Naknek	0.02	0.21	-	23.17	2.07	7.48	48.83	-	-	17.90	0.30	0.02	100.00
Egegik	-	-	-	4.99	1.83	2.18	70.09	0.06	0.03	16.20	3.66	0.96	100.00
Ugashik	0.16	0.10	-	23.74	0.47	3.00	68.23	-	0.03	4.19	0.05	0.03	100.00
Wood	-	0.64	0.25	43.95	0.05	24.23	28.20	-	-	2.68	-	-	100.00
Igushik	-	-	0.13	40.10	-	39.87	17.94	-	-	1.96	-	-	100.00
Snake	-	-	-	44.02	-	22.35	30.95	-	-	2.68	-	-	100.00
Nuyakuk	0.50	-	3.44	55.43	-	28.51	9.34	-	-	2.78	-	-	100.00
Nushagak- Mulchatna	5.05	0.19	21.91	41.45	-	23.15	4.86	-	0.19	3.20	-	-	100.00
Togiak	0.36	-	0.45	56.86	0.01	20.82	15.36	-	0.02	6.10	0.02	-	100.00
Total Bay	0.04	0.19	0.09	56.72	2.97	6.15	28.09	0.01	0.00	5.21	0.42	0.11	100.00

Table 5. 1969 Bristol Bay sockeye salmon return by ocean age group.

System	Ocean age group				Total
	1	2	3	4	
Kvichak					
Number	494,862	11,188,361	471,546	-	12,154,769
Percent	4.07	92.05	3.88	-	100.00
Branch					
Number	13,748	199,056	60,303	-	273,107
Percent	5.03	72.89	22.08	-	100.00
Naknek					
Number	48,702	1,543,998	542,392	-	2,135,092
Percent	2.28	72.32	25.40	-	100.00
Egegik					
Number	35,888	1,499,937	368,510	541	1,904,876
Percent	1.88	78.74	19.35	0.03	100.00
Ugashik					
Number	1,879	304,386	23,852	108	330,225
Percent	0.57	92.18	7.22	0.03	100.00
Wood					
Number	7,238	762,220	286,917	-	1,056,375
Percent	0.69	72.15	27.16	-	100.00
Igushik					
Number	-	436,172	315,382	-	751,554
Percent	-	58.04	41.96	-	100.00
Nuyakuk					
Number	-	84,506	44,958	-	129,464
Percent	-	65.27	34.73	-	100.00
Snake					
Number	-	6,972	2,328	-	9,300
Percent	-	74.97	25.03	-	100.00
Nushagak-Mulchatna					
Number	73	20,079	18,874	74	39,100
Percent	0.19	51.35	48.27	0.19	100.00
Togiak					
Number	25	176,794	66,645	54	243,518
Percent	0.01	72.60	27.37	0.02	100.00
Total Bay					
Number	602,415	16,222,481	2,201,707	777	19,027,380
Percent	3.17	85.26	11.57	0.00	100.00

Naknek-Kvichak District

Fishing district boundaries of the Naknek-Kvichak district in 1969 remained unchanged from previous years. Fishing periods for the Naknek and Kvichak sections coincided until July 3, when achievement of the Naknek River escapement goal was assured. The Naknek section was then opened to continuous fishing while fishing time in the Kvichak section continued to be regulated by emergency order. The Kvichak section was opened to continuous fishing July 8.

Regulations affecting gill net mesh size remained unchanged for Bristol Bay in 1969. Minimum mesh size for sockeye salmon was 5-3/8 inch stretch measure. The allowable length of gill net amounted to 125 fathoms per drift net and 50 fathoms per set net.

Pre-season gill net registration, drift and set net combined, was 1,252. This represented a 23 percent increase over the 1968 registration.

Data based on fish ticket delivery tabulations, indicated a maximum effort occurred July 7-13 when 1,444 units of gear caught 1,697,318 sockeye salmon or 36 percent of the total district sockeye catch. Prior to July 3, a fishermen-industry price dispute severely hampered the rate of commercial exploitation in this district. A vessel blockade formed by independent fishermen across the entrance of the Naknek River prevented non-striking fishermen from fishing during a 12-hour fishing period on July 1. The price dispute was settled on July 3, by which time over 5,000,000 sockeye salmon had escaped the fishery into the Kvichak River and the commercial harvest of 859,677 was only 13 percent of the projected harvest.

The 1969 Naknek-Kvichak sockeye salmon inshore run of 14,562,968 was 24 percent higher than the average run since 1955.

The district sockeye salmon catch of 4,655,072 represented 70 percent of the total Bristol Bay sockeye catch. The king salmon catch of 19,016 was the largest harvest since 1929, and was 52 percent above the average harvest since 1951. The chum salmon catch of 42,535 was low compared to the average catch of 116,356 since 1951. However, the 1969 chum harvest was comparable to the recent four-year average (1965-68) harvest of 48,874. The coho salmon catch was negligible, while the pink salmon harvest is substantial only on even-numbered years.

The district sockeye escapement was 9,907,896 with the Kvichak River accounting for the bulk of the escapement (8,394,204).

The total sockeye inshore run, catch plus escapement, amounted to 14,562,968, only 9 percent below the pre-season forecast of 15,937,000 sockeye.

Sockeye salmon returning to the Kvichak, Branch, and Naknek Rivers are harvested as mixed stocks in the Naknek-Kvichak district (Refer to Figure 2). The fish in the catch are apportioned to the individual river systems by the method described in Informational Leaflet 121 (McCurdy, 1968).

(From U.S.C.G.S. Chart #9051.
 Shaded areas are exposed at mean
 low water. Scale: 1 inch = 2-2/3 miles)

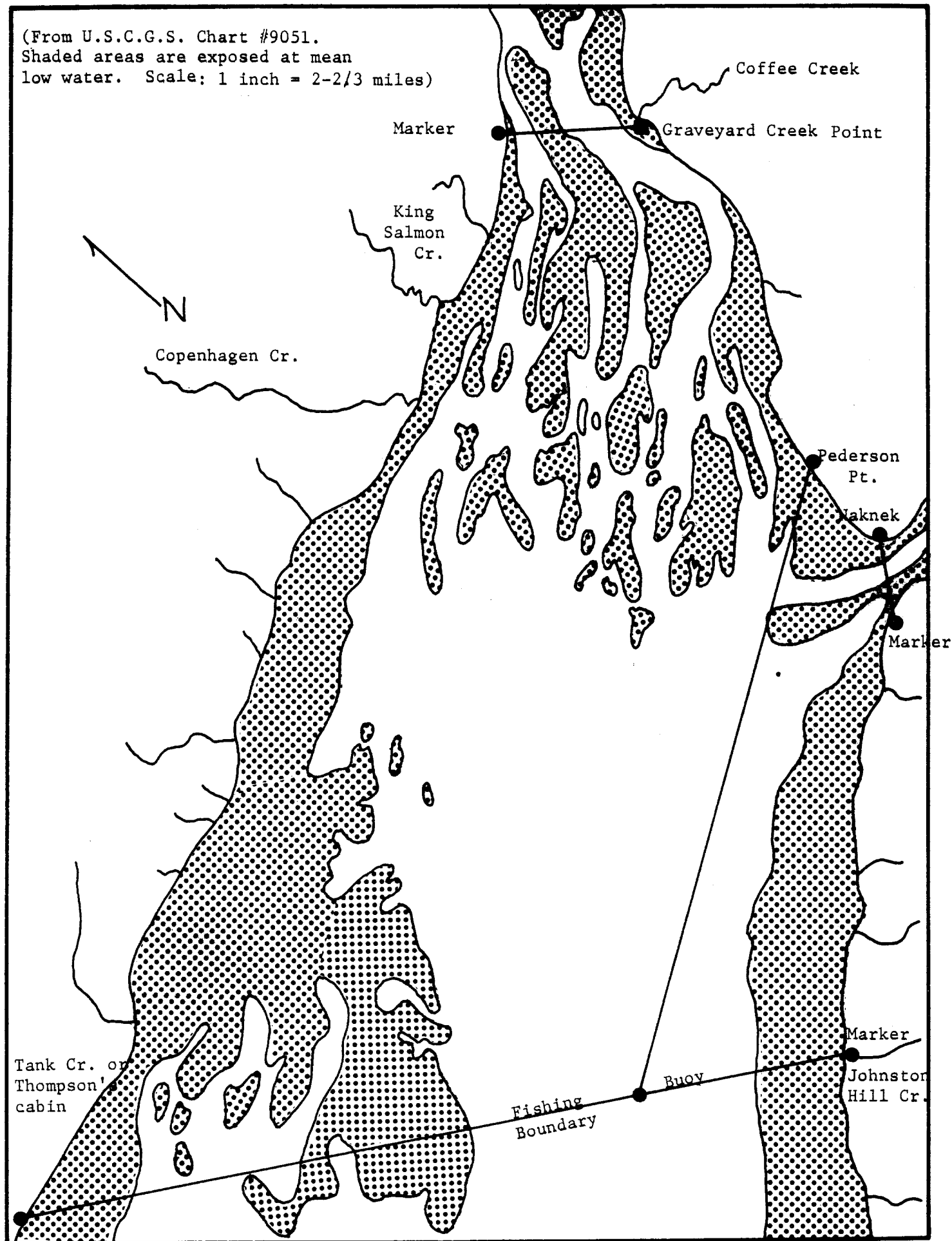


Figure 2. Naknek-Kvichak commercial fishing district boundaries, 1969.

TABLE 6. Naknek-Kvichak district inshore run of sockeye salmon, age group and percent by period and sex, 1969.

	Age Group									Total
	3 ₁	3 ₂	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	
MALES										
Escapement	-	28,536	3,393,485	472,801	120,496	920,326	160,787	2,238	-	5,098,669
Catch	3,525	-	1,402,356	55,975	92,072	563,529	123,564	3,106	1,433	2,245,560
Total	3,525	28,536	4,795,841	528,776	212,568	1,483,855	284,351	5,344	1,433	7,344,229
Percent	0.05	0.39	65.30	7.20	2.89	20.21	3.87	0.07	0.02	100.00
FEMALES										
Escapement	-	-	3,347,782	-	165,004	1,163,297	132,530	614	-	4,809,227
Catch	-	-	1,478,279	-	87,703	649,376	189,198	3,502	1,454	2,409,512
Total	-	-	4,826,061	-	252,707	1,812,673	321,728	4,116	1,454	7,218,739
Percent	-	-	66.85	-	3.50	25.11	4.46	0.06	0.02	100.00
SEXES COMBINED										
Escapement	-	28,536	6,741,368	472,801	285,500	2,083,623	293,317	2,852	-	9,907,896
Catch	3,525	-	2,880,635	55,975	179,775	1,212,905	312,762	6,608	2,887	4,655,072
Total	3,525	28,536	9,621,902	528,776	465,275	3,296,528	606,079	9,460	2,887	14,562,968
Percent	0.02	0.20	66.07	3.63	3.19	22.64	4.16	0.07	0.02	100.00

TABLE 7. Naknek-Kvichak district commercial catch sex composition of sockeye salmon by sample periods, 1969.

Date	No. of samples	No. in samples		Percent		Commercial Catch	No. in Catch	
		Males	Females	Males	Females		Male	Female
-6/26	2	152	173	46.77	53.23	57,887	27,074	30,813
6/27-30	4	268	272	49.63	50.37	780,447	387,336	393,111
7/1-7/4	3	230	226	50.44	49.56	1,605,951	810,042	795,909
7/5-6	2	217	243	47.17	52.83	385,565	181,871	203,694
7/7-	8	240	282	45.98	54.02	1,825,222	839,237	985,985
Total	19	1,107	1,196	48.24	51.76	4,655,072	2,245,560	2,409,512

TABLE 8. Naknek-Kvichak district commercial catch of male sockeye salmon by age group and percent, 1969.

		Age Group								Total	
		3 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄		
MALES											
Sample Period											
1	Number	-	15,319	-	1,781	8,550	1,424	-	-	27,074	
	Percent	-	56.58	-	6.58	31.58	5.26	-	-	100.00	
2	Number	-	218,264	-	23,124	117,053	26,029	1,433	1,433	387,336	
	Percent	-	56.35	-	5.97	30.22	6.72	0.37	0.37	100.00	
3	Number	-	538,921	7,047	31,673	200,728	31,673	-	-	810,042	
	Percent	-	66.53	0.87	3.91	24.78	3.91	-	-	100.00	
4	Number	-	133,275	-	7,548	34,355	5,020	1,673	-	181,871	
	Percent	-	73.28	-	4.15	18.89	2.76	0.92	-	100.00	
5	Number	3,525	496,577	48,928	27,946	202,843	59,418	-	-	839,237	
	Percent	0.42	59.17	5.83	3.33	24.17	7.08	-	-	100.00	

TABLE 9. Naknek-Kvichak commercial catch of female sockeye salmon by age group and percent, 1969.

		Age Group						
		4 ₂	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	Total
FEMALES								
Sample Period								
1	Number	13,715	4,631	8,193	4,274	-	-	30,813
	Percent	44.51	15.03	26.59	13.87	-	-	100.00
2	Number	192,192	31,803	115,614	52,048	-	1,454	393,111
	Percent	48.89	8.09	29.41	13.24	-	0.37	100.00
3	Number	535,328	17,590	190,222	49,267	3,502	-	795,909
	Percent	67.26	2.21	23.90	6.19	0.44	-	100.00
4	Number	139,143	9,227	48,622	6,702	-	-	203,694
	Percent	68.31	4.53	23.87	3.29	-	-	100.00
5	Number	597,901	24,452	286,725	76,907	-	-	985,985
	Percent	60.64	2.48	29.08	7.80	-	-	100.00

TABLE 10. Naknek-Kvichak commercial catch of sockeye salmon, age group and percent by period and sex, 1969.

SEXES COMBINED		Age Group								Total
		3 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	
Sample Period										
1	Number	-	29,034	-	6,412	16,743	5,698	-	-	57,887
	Percent	-	50.16	-	11.08	28.92	9.84	-	-	100.00
2	Number	-	410,456	-	54,927	232,667	78,077	1,433	2,887	780,447
	Percent	-	52.60	-	7.04	29.81	10.00	0.18	0.37	100.00
3	Number	-	1,074,249	7,047	51,263	390,950	80,940	3,502	-	1,607,951
	Percent	-	66.81	0.44	3.19	24.31	5.03	0.22	-	100.00
4	Number	-	272,418	-	16,775	82,977	11,722	1,673	-	385,565
	Percent	-	70.66	-	4.35	21.52	3.04	0.43	-	100.00
5	Number	3,525	1,094,478	48,928	52,398	489,568	136,325	-	-	1,825,222
	Percent	0.19	59.97	2.68	2.87	26.82	7.47	-	-	100.00

TABLE 11. Naknek-Kvichak district commercial catch, age composition of sockeye salmon, both sexes combined, 1969.

	3 ₁	4 ₂	4 ₃	5 ₂	Age group 5 ₃ Percent	6 ₃	6 ₄	7 ₄	Total
Males									
Number	3,525	1,402,356	55,975	92,072	563,529	123,564	3,106	1,433	2,245,560
Percent	0.16	62.45	2.49	4.10	25.10	5.50	0.14	0.06	100.00
Females									
Number	-	1,478,279	-	87,703	649,376	189,198	3,502	1,454	2,409,512
Percent	-	61.35	-	3.64	26.95	7.85	0.15	0.06	100.00
Sexes combined									
Number	3,525	2,880,635	55,975	179,775	1,212,905	312,762	6,608	2,887	4,655,072
Percent	0.08	61.88	1.20	3.86	26.06	6.72	0.14	0.06	100.00

TABLE 23. Kvichak system catch and escapement of sockeye salmon, by sex, by age group, 1969.

	3 ₁	3 ₂	4 ₂	4 ₃	Age Group		5 ₃	6 ₃	6 ₄	7 ₄	Total
					5 ₂						
<u>Catch</u>											
Males:											
Number	3,036	-	1,317,373	51,228	48,421	378,410	59,323	-	1,234	1,859,025	
Percent	0.16		70.86	2.76	2.60	20.36	3.19		0.07	100.00	
Females:											
Number	-	-	1,386,626	-	46,623	413,328	50,837	2,915	1,211	1,901,540	
Percent			72.93		2.45	21.74	2.67	0.15	0.06	100.00	
Sexes combined:											
Number	3,036	-	2,703,999	51,228	95,044	791,738	110,160	2,915	2,445	3,760,565	
Percent	0.08		71.91	1.36	2.53	21.05	2.93	0.08	0.06	100.00	
<u>Escapement</u>											
Males:											
Number	-	10,931	3,188,082	432,703	63,371	618,046	77,194	-	-	4,390,327	
Percent		0.24	72.62	9.86	1.44	14.08	1.76			100.00	
Females:											
Number	-	-	3,140,152	-	87,724	740,393	35,608	-	-	4,003,877	
			78.43		2.19	18.49	0.89			100.00	
Sexes combined:											
Number	-	10,931	6,328,234	432,703	151,095	1,358,439	112,802	-	-	8,394,204	
Percent		0.13	75.40	5.15	1.80	16.18	1.34			100.00	
<u>Catch and Escapement</u>											
Males:											
Number	3,036	10,931	4,505,455	483,931	111,792	996,456	136,517	-	1,234	6,249,352	
Percent	0.05	0.17	72.11	7.74	1.79	15.94	2.18		0.02	100.00	
Females:											
Number	-	-	4,526,778	-	134,347	1,153,721	86,445	2,915	1,211	5,905,417	
Percent			76.65		2.28	19.54	1.46	0.05	0.02	100.00	
Sexes combined:											
Number	3,036	10,931	9,032,233	483,931	246,139	2,150,177	222,962	2,915	2,445	12,154,769	
Percent	0.02	0.09	74.33	3.98	2.02	17.69	1.83	0.02	0.02	100.00	

TABLE 13. Branch system catch and escapement of sockeye salmon, by sex, by age group, 1969.

	3 ₁	3 ₂	4 ₂	4 ₃	Age Group 5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	Total
<u>Catch</u>										
Males:										
Number	56	-	11,359	62	13,940	13,355	383	-	23	39,178
Percent	0.14		28.99	0.16	35.58	34.09	0.98		0.06	100.00
Females:										
Number	-	-	17,296	-	9,428	24,611	-	74	30	51,439
Percent			33.62		18.33	47.85		0.14	0.06	100.00
Sexes combined:										
Number	56	-	28,655	62	23,368	37,966	383	74	53	90,617
Percent	0.06		31.62	0.07	25.79	41.90	0.42	0.08	0.06	100.00
<u>Escapement</u>										
Males:										
Number	-	13,180	27,372	506	18,248	21,798	506	-	-	81,610
Percent		16.15	33.54	0.62	22.36	26.71	0.62			100.00
Females:										
Number	-	-	39,030	-	17,745	44,105	-	-	-	100,880
Percent			38.69		17.59	43.72				100.00
Sexes combined:										
Number	-	13,180	66,402	506	35,993	65,903	506	-	-	182,490
Percent		7.22	36.39	0.28	19.72	36.11	0.28			100.00
<u>Catch and Escapement</u>										
Males:										
Number	56	13,180	38,731	568	32,188	35,153	889	-	23	120,788
Percent	0.05	10.91	32.06	0.47	26.65	29.10	0.74		0.02	100.00
Females:										
Number	-	-	56,326	-	27,173	68,716	-	74	30	152,319
Percent			36.98		17.84	45.11		0.05	0.02	100.00
Sexes combined:										
Number	56	13,180	95,057	568	59,361	103,869	889	74	53	273,107
Percent	0.02	4.83	34.81	0.21	21.74	38.01	0.03	0.03	0.02	100.00

TABLE 14. Naknek system catch and escapement of sockeye salmon, by sex, by age group, 1969.

	3 ₁	3 ₂	4 ₂	4 ₃	Age Group 5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	Total
<u>Catch</u>										
Males:										
Number	433	-	73,624	4,685	29,711	171,764	63,858	3,106	176	347,357
Percent	0.12		21.20	1.35	8.55	49.46	18.38	0.89	0.05	100.00
Females:										
Number	-	-	74,357	-	31,652	211,437	138,361	513	213	456,533
Percent			16.29		6.93	46.31	30.31	0.11	0.05	100.00
Sexes combined:										
Number	433	-	147,981	4,685	61,363	383,201	202,219	3,619	389	803,890
Percent	0.05		18.41	0.58	7.63	47.67	25.16	0.45	0.05	100.00
<u>Escapement</u>										
Males:										
Number	-	4,425	178,031	39,592	38,877	280,482	83,087	2,238	-	626,732
Percent		0.71	28.41	6.32	6.20	44.75	13.26	0.35		100.00
Females:										
Number	-	-	168,600	-	59,535	378,799	96,922	614	-	704,470
Percent			23.93		8.45	53.77	13.76	0.09		100.00
Sexes combined:										
Number	-	4,425	346,631	39,592	98,412	659,281	180,009	2,852	-	1,331,202
Percent		0.33	26.04	2.97	7.39	49.54	13.52	0.21		100.00
<u>Catch and Escapement</u>										
Males:										
Number	433	4,425	251,655	44,277	68,588	452,246	146,945	5,344	176	974,089
Percent	0.04	0.45	25.83	4.55	7.04	46.43	15.09	0.55	0.02	100.00
Females:										
Number	-	-	242,957	-	91,187	590,236	235,283	1,127	213	1,161,003
Percent			20.93		7.85	50.83	20.27	0.10	0.02	100.00
Sexes combined:										
Number	433	4,425	494,612	44,277	159,775	1,042,482	382,228	6,471	389	2,135,092
Percent	0.02	0.21	23.17	2.07	7.48	48.83	17.90	0.30	0.02	100.00

TABLE 15. Kvichak River escapement sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
-7/4	8	155	150	50.82	49.18	1,188,772	604,134	584,638
7/5-8	4	182	186	49.46	50.54	3,087,170	1,526,914	1,560,256
7/9-	11	322	265	54.86	45.14	4,118,262	2,259,279	1,858,983
Total	23	659	601	52.30	47.70	8,394,204	4,390,327	4,003,877

TABLE 16. Naknek River escapement sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
6/27-6/29	3	191	191	50.00	50.00	236,292	118,146	118,146
6/30-7/10	9	229	264	46.45	53.55	1,094,910	508,586	586,324
Total	12	420	455	48.00	52.00	1,331,202	626,732	704,470

TABLE 17. Branch River escapement sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
-7/16	16	161	199	44.72	55.28	182,490	81,610	100,880
Total	16	161	199	44.72	55.28	182,490	81,610	100,880

TABLE 18. Kvichak River daily sockeye salmon escapements, 1969.

Date	Daily Count	Accumulative	Daily % of Total	Accum. %
June 22	30	30	.00	.00
23	66	96	.00	.00
24	24	120	.00	.00
25	180	300	.00	.00
26	228	528	.00	.00
27	78	606	.00	.00
28	96	702	.00	.00
29	174	876	.65	.65
30	54,174	55,058	2.21	2.86
July 1	185,544	240,594	2.73	5.59
2	228,942	469,536	3.60	9.19
3	302,562	772,098	4.96	14.15
4	416,634	1,188,732	6.71	20.86
5	563,040	1,751,772	8.66	29.52
6	727,032	2,478,804	10.09	39.61
7	847,122	3,325,926	11.32	50.93
8	950,016	4,275,942	10.35	61.28
9	868,470	5,144,412	9.50	70.78
10	797,400	5,941,812	8.03	78.81
11	673,680	6,615,492	4.71	83.52
12	395,304	7,010,796	4.31	87.83
13	361,374	7,372,170	3.52	91.35
14	295,086	7,667,256	3.20	94.55
15	268,878	7,936,134	1.95	96.50
16	163,350	8,099,484	1.38	97.88
17	116,124	8,215,608	0.74	98.62
18	62,412	8,278,020	0.37	98.99
19	31,050	8,309,070	0.26	99.25
20	21,984	8,331,054	0.26	99.51
21	21,828	8,352,882	0.18	99.69
22	15,228	8,368,110	0.12	99.81
23	10,446	8,378,556	0.08	99.89
24	6,480	8,385,036	0.04	99.93
25	3,150	8,388,186	0.02	99.95
26	1,926	8,390,112	0.02	99.97
27	11,614	8,391,726	0.01	99.93
28	906	8,392,632	0.01	99.99
29	492	8,393,124	0.01	100.00
30	876	8,394,000	0.00	100.00
31	204	8,394,204		
Total	8,394,204	8,394,204	100.00	100.00

TABLE 19. Kvichak escapement of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group						
		3 ₂	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	Total
MALES								
Sample Period								
1	Number	3,927	374,140	58,480	31,173	120,827	15,587	604,134
	Percent	0.65	61.93	9.68	5.16	20.00	2.58	100.00
2	Number	-	1,115,869	100,624	25,194	251,635	33,592	1,526,914
	Percent		73.08	6.59	1.65	16.48	2.20	100.00
3	Number	7,004	1,698,073	273,599	7,004	245,584	28,015	2,259,279
	Percent	0.31	75.16	12.11	0.31	10.87	1.24	100.00
FEMALES								
Sample Period								
1	Number	-	366,393	-	23,386	183,167	11,692	584,638
	Percent		62.67		4.00	31.33	2.00	100.00
2	Number	-	1,132,278	-	50,396	360,731	16,851	1,560,256
	Percent		72.57		3.23	23.12	1.08	100.00
3	Number	-	1,641,482	-	13,942	196,495	7,064	1,858,983
	Percent		88.30		0.75	10.57	0.38	100.00
SEXES COMBINED								
Sample Period								
1	Number	3,927	740,533	58,480	54,559	303,994	27,279	1,188,772
	Percent	0.33	62.30	4.92	4.59	25.57	2.29	100.00
2	Number	-	2,248,147	100,624	75,590	612,366	50,443	3,087,170
	Percent		72.82	3.26	2.45	19.84	1.63	100.00
3	Number	7,004	3,339,555	273,599	20,946	442,079	35,079	4,118,262
	Percent	0.17	81.10	6.64	0.51	10.73	0.85	100.00

TABLE 20. Branch Tower daily sockeye salmon escapements, 1969.

Date	Daily Count	Accumulative	Daily % of Total	Accum. %
June 21	0	0	.00	.00
22	0	0	.00	.00
23	0	0	.00	.00
24	0	0	.00	.00
25	0	0	.00	.00
26	0	0	.00	.00
27	0	0	.00	.00
28	0	0	.00	.00
29	0	0	.00	.00
30	2,748	2,748	1.51	1.51
July 1	19,998	22,746	10.96	12.47
2	16,422	39,168	9.00	21.47
3	21,594	60,762	11.83	33.30
4	31,056	91,818	17.02	50.32
5	26,502	118,320	14.52	64.84
6	25,932	144,252	14.21	79.05
7	24,582	168,834	13.47	92.52
8	9,096	177,930	4.99	97.51
9	1,884	179,814	1.03	98.54
10	756	180,570	0.41	98.95
11	282	180,852	0.16	99.11
12	546	181,398	0.30	99.41
13	420	181,818	0.23	99.64
14	330	182,148	0.18	99.82
15	336	182,484	0.18	100.00
16	6	182,490	.00	100.00
Total	182,490	182,490	100.00	100.00

TABLE 21. Naknek River daily sockeye salmon escapements, 1969.

Date	Daily Count	Accumulative	Daily % of Count	Accum. %
June 22	0	0	.00	.00
23	0	0	.00	.00
24	0	0	.00	.00
25	0	0	.00	.00
26	744	744	.06	.06
27	15,666	16,410	1.18	1.24
28	87,078	103,488	6.54	7.78
29	132,804	236,292	9.98	17.76
30	182,664	418,956	13.72	31.48
July 1	216,054	635,010	16.23	47.71
2	202,662	837,672	15.22	62.93
3	185,736	1,023,408	13.95	76.88
4	138,696	1,162,104	10.42	87.30
5	34,914	1,197,018	2.62	89.92
6	39,030	1,206,048	0.68	90.60
7	11,058	1,217,106	0.83	91.43
8	12,690	1,229,796	0.95	92.38
9	20,868	1,250,664	1.57	93.95
10	18,594	1,269,258	1.40	95.35
11	15,582	1,284,840	1.17	96.52
12	13,752	1,298,592	1.03	97.55
13	7,068	1,305,660	0.53	98.08
14	7,020	1,312,680	0.53	98.61
15	2,754	1,315,434	0.21	98.82
16	1,734	1,317,168	0.13	98.95
17	1,206	1,318,374	0.09	99.04
18	1,578	1,319,952	0.12	99.16
19	954	1,320,906	0.07	99.23
20	1,212	1,322,118	0.09	99.32
21	1,332	1,323,450	0.10	99.42
22	1,728	1,325,178	0.13	99.55
23	1,518	1,326,696	0.11	99.66
24	678	1,327,374	0.05	99.71
25	1,128	1,328,502	0.09	99.80
26	840	1,329,342	0.06	99.86
27	492	1,329,834	0.04	99.90
28	642	1,330,476	0.05	99.95
29	462	1,330,938	0.03	99.98
30	264	1,331,202	0.02	100.00
Total	1,331,202	1,331,202	100.00	100.00

TABLE 22. Naknek escapement of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group							
		3 ₂	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	6 ₄	Total
MALES									
Sample Period									
1	Number	-	35,881	1,854	5,565	60,621	14,225	-	118,146
	Percent		30.37	1.57	4.71	51.31	12.04		100.00
2	Number	4,425	142,150	37,737	33,312	219,862	68,863	2,237	508,586
	Percent	0.87	27.95	7.42	6.55	43.23	13.54	0.44	100.00
3	Number	4,450	177,992	39,609	38,857	280,463	83,105	2,256	626,732
	Percent	0.71	28.40	6.32	6.20	44.75	13.26	0.36	100.00
FEMALES									
Sample Period									
1	Number	-	30,931	-	17,320	50,106	19,175	614	118,146
	Percent		26.18		14.66	42.41	16.23	0.52	100.00
2	Number	-	137,669	-	42,215	328,693	77,747	-	586,324
	Percent		23.48		7.20	56.06	13.26		100.00
3	Number	-	168,580	-	59,528	378,794	96,935	633	704,470
	Percent		23.93		8.45	53.77	13.76	0.09	100.00
SEXES COMBINED									
Sample Period									
1	Number	-	66,812	1,854	22,885	110,727	33,400	614	236,292
	Percent		28.28	0.78	9.69	46.86	14.14	0.25	100.00
2	Number	4,425	279,819	37,737	75,527	548,555	146,610	2,237	1,094,910
	Percent	0.40	25.56	3.45	6.90	50.10	13.39	0.20	100.00
3	Number	4,450	346,572	39,609	98,385	659,257	180,040	2,889	1,331,202
	Percent	0.33	26.03	2.98	7.39	49.53	13.52	0.22	100.00

Egegik District

Fishing district boundaries of the Egegik district in 1969 remained unchanged from previous years.

The pre-season initial gill net gear registration totaled 484 units, drift and set net combined, equal to the recorded effort in 1968.

The highest number of gear units fishing in this district was 334 during the 12-hour period on July 1. The July 1 period also produced the peak sockeye salmon catch for the season, when 256,055 fish were caught representing 29 percent of the total district catch. The Egegik fishery was not affected seriously by the fishermen-industry price dispute.

The Egegik district sockeye salmon catch totaled 889,322 or 13 percent of the total Bristol Bay catch. The district sockeye escapement was 1,015,554, bringing the total sockeye inshore run, catch plus escapement, to 1,904,876, only three percent below the pre-season forecast of 1,972,000 sockeye.

The king salmon catch of 2,801 fish was equal to the 18-year average catch, while the chum salmon harvest of 7,835 was well below the 18-year average of 26,038. The total harvest of coho salmon amounted to 5,548, or 48 percent higher than the 18-year average.

Figure 3. Egegik commercial fishing district boundaries, 1969.

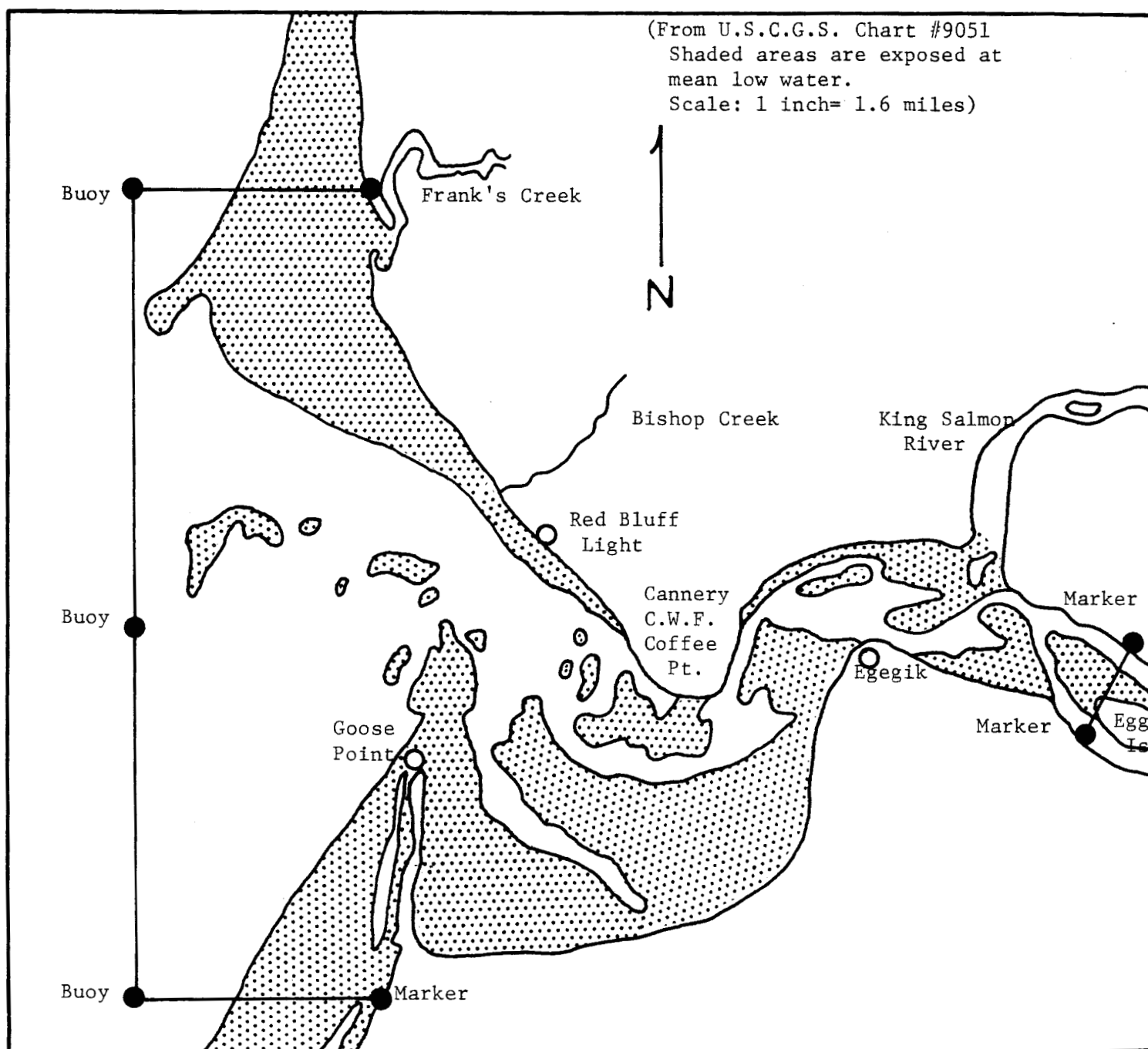


TABLE 23. Egegik district commercial catch and escapement of sockeye salmon, by sex, by age group, 1969.

	4 ₂	4 ₃	5 ₂	5 ₃	Age Group		6 ₂	6 ₃	6 ₄	7 ₄	Total
					5 ₄						
<u>Catch</u>											
Males:											
Number	38,909	790	10,410	292,636	—	—	54,492	18,247	4,930	420,414	
Percent	9.25	0.19	2.48	69.61	—	—	12.96	4.34	1.17	100.00	
Females:											
Number	31,359	—	13,735	301,009	—	541	106,491	11,929	3,844	468,908	
Percent	6.69	—	2.93	64.19	—	0.12	22.71	2.54	0.82	100.00	
Sexes combined:											
Number	70,268	790	24,145	593,645	—	541	160,983	30,176	8,774	889,322	
Percent	7.90	0.09	2.72	66.75	—	0.06	18.10	3.39	0.99	100.00	
<u>Escapement</u>											
Males:											
Number	13,610	34,075	6,823	292,010	1,023	—	65,441	17,710	3,758	434,450	
Percent	3.13	7.84	1.57	67.22	0.24	—	15.06	4.08	0.86	100.00	
Females:											
Number	11,245	—	10,590	449,465	—	—	82,193	21,808	5,803	581,104	
Percent	1.94	—	1.82	77.35	—	—	14.14	3.75	1.00	100.00	
Sexes combined:											
Number	24,855	34,075	17,413	741,475	1,023	—	147,634	39,518	9,561	1,015,554	
Percent	2.45	3.36	1.71	73.01	0.10	—	14.54	3.89	0.94	100.00	
<u>Catch and Escapement</u>											
Males:											
Number	52,519	34,865	17,233	584,646	1,023	—	119,933	35,957	8,688	854,864	
Percent	6.14	4.08	2.02	68.39	0.12	—	14.02	4.21	1.02	100.00	
Females:											
Number	42,604	—	24,325	750,474	—	541	188,684	33,737	9,647	1,050,012	
Percent	4.06	—	2.32	71.47	—	0.05	17.97	3.21	0.92	100.00	
Sexes combined:											
Number	95,123	34,865	41,558	1,335,120	1,023	541	308,617	69,694	18,335	1,904,876	
Percent	4.99	1.83	2.18	70.09	0.05	0.03	16.21	3.66	0.96	100.00	

TABLE 24. Egegik District commercial catch, sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Catch	No. in Catch	
		Males	Females	Males	Females		Males	Females
-6/28	2	259	247	51.19	48.81	128,552	65,806	62,746
6/29-6/30	2	197	185	51.57	48.43	218,010	112,428	105,582
7/1-	7	452	561	44.62	55.38	542,760	242,180	300,580
Total	11	908	993	47.27	52.73	889,322	420,414	468,908

TABLE 25. Egegik River escapement, sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
7/2-7/7	6	168	323	34.22	65.78	335,376	114,766	220,610
7/8-	11	313	353	47.00	53.00	680,178	319,684	360,494
Total	17	481	676	42.78	57.22	1,015,554	434,450	581,104

TABLE 26. Egegik District catch of sockeye salmon, age group and percent by period and sex, 1969.

		4 ₂	4 ₃	5 ₂	5 ₃	Age Group 6 ₂	6 ₃	6 ₄	7 ₄	Total
MALES										
Sample Period										
1	Number	4,830	257	2,283	51,066	-	6,100	1,270	-	65,806
	Percent	7.34	0.39	3.47	77.60	-	9.27	1.93	-	100.00
2	Number	5,138	-	1,709	86,188	-	11,411	6,273	1,709	112,428
	Percent	4.57	-	1.52	76.66	-	10.15	5.58	1.52	100.00
3	Number	28,941	533	6,418	155,382	-	36,981	10,704	3,221	242,180
	Percent	11.95	0.22	2.65	64.16	-	15.27	4.42	1.33	100.00
FEMALES										
Sample Period										
1	Number	6,350	-	1,776	42,428	-	12,192	-	-	62,746
	Percent	10.12	-	2.83	67.62	-	19.43	-	-	100.00
2	Number	5,712	-	2,851	66,781	-	26,248	2,280	1,710	105,582
	Percent	5.41	-	2.70	63.25	-	24.86	2.16	1.62	100.00
3	Number	19,297	-	9,108	191,800	541	68,051	9,649	2,134	300,580
	Percent	6.42	-	3.03	63.81	0.18	22.64	3.21	0.71	100.00
SEXES COMBINED										
Sample Period										
1	Number	11,180	257	4,059	93,494	-	18,292	1,270	-	128,552
	Percent	8.69	0.20	3.16	72.73	-	14.23	0.99	-	100.00
2	Number	10,850	-	4,560	152,969	-	37,659	8,553	3,419	218,010
	Percent	4.98	-	2.09	70.17	-	17.27	3.92	1.57	100.00
3	Number	48,238	533	15,526	347,182	541	105,032	20,353	5,355	542,760
	Percent	8.89	0.10	2.86	63.96	0.10	19.35	3.75	0.99	100.00

TABLE 27. Egegik River daily sockeye salmon escapements, 1969.

Date	Daily Count	Accumulative	Daily % of Total	Accum. %
June 28	0	0	0	0
29	0	0	0	0
30	1,212	1,212	.12	.12
July 1	276	1,488	.03	.15
2	11,028	12,516	1.09	1.24
3	33,672	46,188	3.32	4.56
4	49,650	95,838	4.89	9.45
5	29,190	125,028	2.88	12.33
6	78,288	203,316	7.71	20.04
7	132,060	335,376	13.00	33.04
8	166,698	502,074	16.41	49.45
9	154,140	656,214	15.18	64.63
10	36,648	692,862	3.61	68.24
11	51,696	744,558	5.09	73.33
12	61,962	806,520	6.08	79.41
13	57,528	864,048	5.67	85.08
14	73,968	938,016	7.28	92.36
15	30,168	968,184	2.97	95.33
16	37,698	1,005,882	3.71	99.04
17	8,328	1,014,210	0.82	99.86
18	1,122	1,015,332	0.11	99.97
19	186	1,015,518	0.02	99.99
20	36	1,015,554	0.01	100.00
Total	1,015,554	1,015,554	100.00	100.00

TABLE 28. Egegik escapement of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group								
		4 ₂	4 ₃	5 ₂	5 ₃	5 ₄	6 ₃	6 ₄	7 ₄	Total
MALES										
Sample Period										
1	Number	1,366	5,463	2,731	78,557	-	22,540	3,420	689	114,706
	Percent	1.19	4.76	2.38	68.45	-	19.64	2.98	0.60	100.00
2	Number	12,244	28,612	4,092	213,453	1,023	42,901	14,290	3,069	319,684
	Percent	3.83	8.95	1.28	66.77	0.32	13.42	4.47	0.96	100.00
FEMALES										
Sample Period										
1	Number	2,052	-	5,471	160,493	-	50,542	1,368	684	220,610
	Percent	0.93	-	2.48	72.75	-	22.91	0.62	0.31	100.00
2	Number	9,193	-	5,119	288,972	-	31,651	20,440	5,119	360,494
	Percent	2.55	-	1.42	80.16	-	8.78	5.67	1.42	100.00
SEXES COMBINED										
Sample Period										
1	Number	3,418	5,463	8,202	239,051	-	73,087	4,788	1,373	335,376
	Percent	1.02	1.63	2.44	71.28	-	21.79	1.43	0.41	100.00
2	Number	21,437	28,612	9,211	502,425	1,023	74,552	34,730	8,188	80,178
	Percent	3.15	4.21	1.35	73.87	0.15	10.96	5.11	1.20	100.00

Ugashik District

Fishing district boundaries in the Ugashik district have remained unchanged since 1967.

The pre-season initial gear registration was 147 units, drift and set net combined, down 4 units from 1968.

As the season progressed and the run failed to show strength, many units of gear transferred to other fishing districts. During the period of peak catches (7/1-6) approximately 58 units of gear remained in the district. During the three 24-hour periods of peak catches, 128,317 sockeye were caught representing 76 percent of the season total catch for the district. The Ugashik fishery was affected by the fishermen-industry price dispute during the 24-hour period on June 29-30, thereafter the dispute did not adversely affect the fishery.

The Ugashik district total season sockeye catch of 169,845 and escapement of 160,380, totaled 330,225 fish, 54 percent below the pre-season forecast of 712,000.

The king salmon catch of 2,107 was equal to the 18-year average harvest, while the chum catch of 1,995 fell well below the average for the same period (23,482). Expansion of the cured-fish market has promoted increased effort on coho salmon stocks in the past 2 seasons. The 9,292 cohos caught represent a 38 percent increase over the previous year and a 64 percent increase over the 18-year average.

Figure 4 . Ugashik commercial fishing district boundaries, 1969.

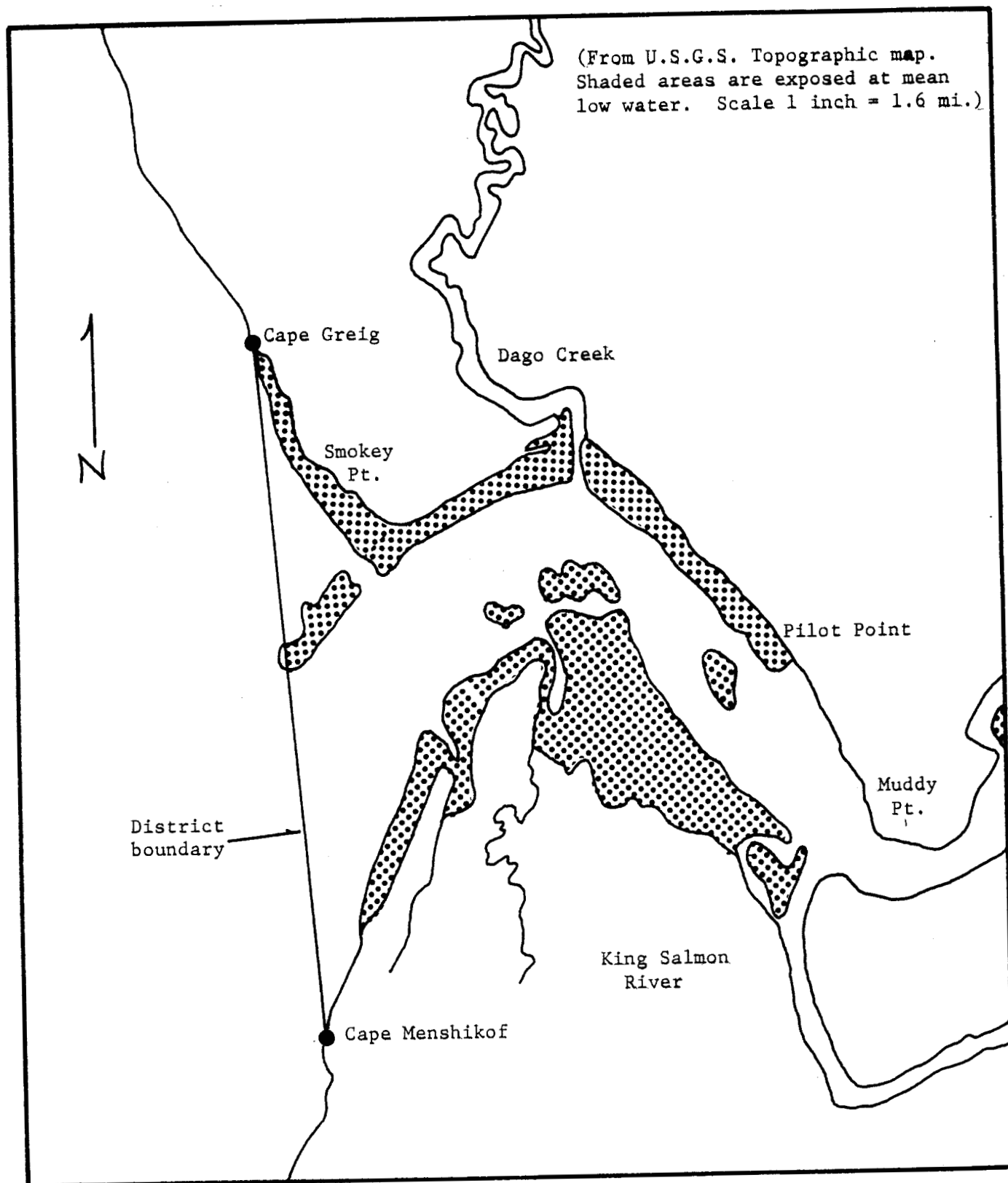


TABLE 29. Ugashik district commercial catch and escapement of sockeye salmon, by sex, by age group, 1969.

	3 ₁	3 ₂	4 ₂	4 ₃	5 ₂	Age group 5 ₃ Percent	6 ₂	6 ₃	6 ₄	7 ₄	Total
<u>Catch</u>											
Males:											
Number	179	-	23,772	179	1,934	50,079	-	3,444	-	-	79,587
Percent	0.22	-	29.87	0.22	2.43	62.93	-	4.33	-	-	100.00
Females:											
Number	-	-	20,222	-	5,260	58,425	108	5,956	179	108	90,258
Percent	-	-	22.40	-	5.83	64.73	0.12	6.60	0.20	0.12	100.00
Sexes combined											
Number	179	-	43,994	179	7,194	108,504	108	9,400	179	108	169,845
Percent	0.11	-	25.90	0.11	4.24	63.88	0.06	5.53	0.11	0.06	100.00
<u>Escapement</u>											
Males:											
Number	-	338	18,045	1,362	2,724	51,757	-	2,724	-	-	76,950
Percent	-	0.44	23.45	1.77	3.54	67.26	-	3.54	-	-	100.00
Females:											
Number	342	-	16,344	-	-	65,042	-	1,702	-	-	83,430
Percent	0.41	-	19.59	-	-	77.96	-	2.04	-	-	100.00
Sexes combined											
Number	342	338	34,389	1,362	2,724	116,799	-	4,426	-	-	160,380
Percent	0.21	0.21	21.44	0.85	1.70	72.83	-	2.76	-	-	100.00
<u>Catch and Escapement</u>											
Males:											
Number	179	338	41,817	1,541	4,658	101,836	-	6,168	-	-	156,537
Percent	0.11	0.22	26.71	0.98	2.98	65.06	-	3.94	-	-	100.00
Females:											
Number	342	-	36,566	-	5,260	123,467	108	7,658	179	108	173,688
Percent	0.20	-	21.05	-	3.03	71.09	0.06	4.41	0.10	0.06	100.00
Sexes combined											
Number	521	338	78,383	1,541	9,918	225,303	108	13,826	179	108	330,225
Percent	0.16	0.10	23.74	0.47	3.00	68.23	0.03	4.19	0.05	0.03	100.00

TABLE 30. Ugashik district commercial catch sex composition of sockeye salmon by sample period, 1969.

Period	No. of Samples	No. in Samples		Percent		Catch	No. in Catch	
		Males	Females	Males	Females		Males	Females
-7/4	3	265	265	50.00	50.00	94,285	47,142	47,143
7/5-	3	298	396	42.94	57.06	75,560	32,445	43,115
Total	6	563	661	46.86	53.14	169,845	79,587	90,258

TABLE 31. Ugashik River escapement, sex composition of sockeye salmon by date, 1969.

Period	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
7/14-7/28	15	226	245	47.98	52.02	160,380	76,950	83,430
Total	15	226	245	47.98	52.02	160,380	76,950	83,430

TABLE 32. Ugashik district commercial catch of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group									
		3 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₂	6 ₂	6 ₄	7 ₄	Total
MALES											
Sample Period											
1	Number	179	16,368	179	1,065	27,215	-	2,136	-	-	47,142
	Percent	0.38	34.72	0.38	2.26	57.73	-	4.53	-	-	100.00
2	Number	-	7,404	-	869	22,864	-	1,308	-	-	32,445
	Percent	-	22.82	-	2.68	70.47	-	4.03	-	-	100.00
FEMALES											
Sample Period											
1	Number	-	12,276	-	3,734	27,395	-	3,559	179	-	47,143
	Percent	-	26.04	-	7.92	58.11	-	7.55	0.38	-	100.00
2	Number	-	7,946	-	1,526	31,030	108	2,397	-	108	43,115
	Percent	-	18.43	-	3.54	71.97	0.25	5.56	-	0.25	100.00
SEXES COMBINED											
Sample Period											
1	Number	179	28,644	179	4,799	54,610	-	5,695	179	-	94,285
	Percent	0.19	30.38	0.19	5.09	57.92	-	6.04	0.19	-	100.00
2	Number	-	15,350	-	2,395	53,894	108	3,705	-	108	75,560
	Percent	-	20.32	-	3.17	71.33	0.14	4.90	-	0.14	100.00

TABLE 33. Ugashik River daily sockeye salmon escapements, 1969.

Date	Daily Count	Accumulative	Daily % of Count	Accum. %
July 1	0	0	0.00	0.00
2	0	0	0.00	0.00
3	0	0	0.00	0.00
4	0	0	0.00	0.00
5	0	0	0.00	0.00
6	0	0	0.00	0.00
7	0	0	0.00	0.00
8	1,638	1,638	1.03	1.03
9	288	1,926	0.18	1.21
10	96	2,022	0.06	1.27
11	42	2,064	0.03	1.30
12	30	2,094	0.02	1.32
13	24	2,118	0.01	1.33
14	35,250	37,368	21.24	22.57
15	97,392	134,760	61.33	83.90
16	7,074	141,834	4.45	88.35
17	2,820	144,654	1.77	90.12
18	3,288	147,942	2.07	92.19
19	1,602	149,544	1.01	93.20
20	2,298	151,842	1.44	94.64
21	1,344	153,186	0.84	95.48
22	1,836	155,022	1.15	96.63
23	2,964	157,986	1.86	98.49
24	534	158,520	0.34	98.83
25	456	158,976	0.29	99.12
26	144	159,120	0.09	99.21
27	252	159,372	0.16	99.37
28	264	159,636	0.17	99.54
29	402	160,038	0.25	99.79
30	192	160,230	0.12	99.91
31	66	160,296	0.04	99.95
Aug. 1	84	160,380	0.05	100.00
TOTAL	160,380	160,380	100.00	100.00

Nushagak District

The Nushagak district fishing boundaries remained unchanged from 1968, except for relocation of the buoy marking the lower limit of the Snake River section and the upper limit of the Igushik section. The Nushagak and Igushik sections were managed separately, while the Snake River section remained closed from June 15 through July 15 in an effort to protect the small expected red salmon run.

Pre-season initial gear registration, drift and set net combined, was 890 units. This represented an increase of 79 units and 9 percent over the 1968 registration, and was a record high registration for the district.

The maximum combined drift and set net gear applied to the sockeye fishery was 525 units of gear, approximately 59 percent of the pre-season registered total. The commercial catch in this district was severely affected by the price dispute. Between June 20 and July 3 only 11,920 sockeye were caught. After settlement of the price dispute on July 3, the 24-hour fishing period on July 3-4 resulted in a catch of 393,706 sockeye salmon, 51 percent of the season's total Nushagak catch.

The total inshore run to the Nushagak district amounted to 1,985,793 sockeye, with an escapement of 1,212,586 and catch of 773,207. The total inshore run was 20 percent below the pre-season forecast of 2,473,000. The Nushagak sockeye salmon catch of 773,207 represented 12 percent of the total Bristol Bay catch. The total district sockeye catch was 16 percent below the average catch of 924,818 since 1951, while the district escapement was 4 percent above the average escapement of 1,161,862 since 1951. After apportioning the sockeye catch to the individual systems the inshore run breakdown was (catch and escapement combined): Wood River, 1,056,375; Igushik, 751,554; Snake, 9,300; Nuyakuk, 129,464; and Nushagak-Mulchatna, 39,100. Weakness of the Wood River return accounted for most of the difference between forecasted and actual run.

The king salmon catch of 80,803 was the sixth largest catch in the last 18 years, and was 26 percent higher than the average catch of 63,942 for this period.

The total catch of chum salmon of 214,235 was 2 percent lower than the average district catch of 218,843 for the past 18 years.

Counting towers were maintained on the Wood, Igushik, Nuyakuk and Nushagak Rivers. Sockeye escapement on the Snake River system was estimated from aerial surveys with age classes assigned as 1963-1965 sampling indicated. Catches were sampled at the canneries at Ekuk and in Dillingham, with special samples taken on Igushik beach fish from the Igushik section and on Flounder Flat set net catches.

Escapement to the Nushagak system were derived by subtracting the Nuyakuk River escapement by age class from that of the main Nushagak, leaving estimated numbers by age class for the Nushagak-Mulchatna system.

The sockeye commercial catch was apportioned to the Nushagak-Igushik systems in a multi-step process in two principal parts. First, Igushik section only fish were treated with Igushik beach sampling to separate Igushik fish. The remainder were called Nushagak section fish. Second, the fish taken when both Nushagak and Igushik were open were treated with Igushik and Nushagak escapements to estimate fish from each section. After this all Igushik fish were added together. All Nushagak section fish were added together and apportioned to rivers in the Nushagak section based on numbers in each escapement by age class and sex. The method is described more fully in Informational Leaflet 121.

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TABLE 34. Nushagak district inshore run of sockeye salmon, age group and percent by period and sex, 1969.

	Age Group									Total
	3 ₁	3 ₂	4 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₂	6 ₃	
MALES										
Escapement	336	6,767	1,502	137,456	-	76,808	77,149	-	11,285	311,813
Catch	1,269	34	4,176	142,027	510	51,997	63,938	-	5,839	269,280
Total	1,605	6,801	5,678	279,483	510	128,805	141,087	-	17,124	581,093
Percent	0.28	1.17	0.98	48.09	0.09	22.16	24.28	-	2.95	100.00
FEMALES										
Escapement	147	-	887	178,205	-	81,597	118,967	74	7,538	387,415
Catch	843	-	9,059	98,701	-	92,597	54,709	-	8,792	264,701
Total	990	-	9,946	276,906	-	174,194	173,676	74	16,330	652,116
Percent	0.15	-	1.53	42.46	-	26.71	26.63	0.01	2.51	100.00
SEXES COMBINED										
Escapement	483	6,767	2,389	315,661	510	159,405	196,116	74	18,823	700,228
Catch	2,112	34	13,235	240,728	-	144,594	118,647	-	14,631	533,981
Total	2,595	6,801	15,624	556,389	510	303,999	314,763	74	33,454	1,234,209
Percent	0.21	0.55	1.27	45.08	0.04	24.63	25.50	0.01	2.71	100.00

TABLE 35. Nushagak district commercial catch, sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Catch	No. in Catch	
		Males	Females	Males	Females		Males	Females
-7/2	5	183	178	52.59	47.41	6,822	3,588	3,234
7/3-5	5	204	221	48.00	52.00	343,591	164,924	178,667
7/6-	11	307	253	54.89	45.11	183,568	100,768	82,800
Total	21	694	652	50.43	49.57	533,981	269,280	264,701

TABLE 36. Nushagak district catch of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group							
		3 ₁	3 ₂	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	Total
MALES									
Sample Period									
1	Number	-	34	34	1,609	750	911	250	3,588
	Percent	-	0.95	0.95	44.84	20.90	25.39	6.97	100.00
2	Number	-	-	1,616	97,816	32,342	31,534	1,616	164,924
	Percent	-	-	0.98	59.31	19.61	19.12	0.98	100.00
3	Number	1,270	-	2,529	42,605	18,904	31,490	3,970	100,768
	Percent	1.26	-	2.51	42.28	18.76	31.25	3.94	100.00
FEMALES									
Sample Period									
1	Number	-	-	-	1,143	938	774	379	3,234
	Percent	-	-	-	35.34	29.01	23.93	11.72	100.00
2	Number	-	4,842	-	63,873	74,379	29,105	6,468	178,667
	Percent	-	2.71	-	35.75	41.63	16.29	3.62	100.00
3	Number	845	4,214	-	33,683	17,280	24,832	1,946	82,800
	Percent	1.02	5.09	-	40.68	20.87	29.99	2.35	100.00
SEXES COMBINED									
Sample Period									
1	Number	-	34	34	2,752	1,688	1,685	629	6,822
	Percent	-	0.50	0.50	40.34	24.74	24.70	9.22	100.00
2	Number	-	4,842	1,616	161,689	106,721	60,639	8,084	343,591
	Percent	-	1.41	0.47	47.06	31.06	17.65	2.35	100.00
3	Number	2,115	4,214	2,529	76,288	36,184	56,322	5,916	183,568
	Percent	1.15	2.30	1.38	41.56	19.71	30.68	3.22	100.00

TABLE 37. Igushik district catch and escapement of sockeye salmon, by sex, by age group, 1969.

	4 ₁	4 ₂	Age Group		6 ₃	Total
			5 ₂	5 ₃		
<u>Catch</u>						
Males:						
Number	521	51,519	35,867	28,986	3,760	120,653
Percent	0.43	42.70	29.73	24.02	3.12	100.00
Females:						
Number	422	43,677	38,821	33,402	2,251	118,573
Percent	0.36	36.83	32.74	28.17	1.90	100.00
Sexes combined:						
Number	943	95,196	74,688	62,388	6,011	239,226
Percent	0.40	39.79	31.22	26.08	2.51	100.00
<u>Escapement</u>						
Males:						
Number	-	98,184	96,635	27,222	3,722	225,763
Percent	-	43.49	42.80	12.06	1.65	100.00
Females:						
Number	-	107,963	128,353	45,219	5,030	286,565
Percent	-	37.67	44.79	15.78	1.76	100.00
Sexes combined:						
Number	-	206,147	224,988	72,441	8,752	512,328
Percent	-	40.24	43.91	14.14	1.71	100.00
<u>Catch and Escapement</u>						
Males:						
Number	521	149,703	132,502	56,208	7,482	346,416
Percent	0.15	43.24	38.24	16.22	2.15	100.00
Females:						
Number	422	151,640	167,174	78,621	7,281	405,138
Percent	0.10	37.43	41.26	19.41	1.80	100.00
Sexes combined:						
Number	943	301,343	299,676	134,829	14,763	751,554
Percent	0.13	40.10	39.87	17.94	1.96	100.00

TABLE 38. Igushik district commercial catch, sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Catch	No. in Catch	
		Males	Females	Males	Females		Males	Females
-7/8	14	433	461	48.43	51.57	146,171	70,790	75,381
7/9-	8	190	169	53.58	46.42	93,055	49,863	43,192
Total	22	623	630	50.43	49.57	239,226	120,653	118,573

52 TABLE 39. Igushik River escapement, sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Catch	No. in Catch	
		Males	Females	Males	Females		Males	Females
-7/1	5	199	163	54.97	45.03	50,094	27,537	22,557
7/2-6	5	184	294	38.49	61.51	152,130	58,555	93,575
7/7-	11	277	338	45.04	54.96	310,104	139,671	170,433
Total	21	660	795	44.07	55.93	512,328	225,763	286,565

TABLE 40. Igushik commercial catch of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group					
		4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	Total
MALES							
Sample Period							
1	Number	325	31,063	19,616	17,167	2,619	70,790
	Percent	0.46	43.88	27.71	24.25	3.70	100.00
2	Number	194	20,459	16,250	11,818	1,142	49,863
	Percent	0.39	41.03	32.59	23.70	2.29	100.00
FEMALES							
Sample Period							
1	Number	324	25,999	24,529	23,217	1,312	75,381
	Percent	0.43	34.49	32.54	30.80	1.74	100.00
2	Number	99	17,679	14,292	10,185	937	43,192
	Percent	0.23	40.93	33.09	23.58	2.17	100.00
SEXES COMBINED							
Sample Period							
1	Number	649	57,062	44,145	40,384	3,931	146,171
	Percent	0.44	39.04	30.20	27.63	2.69	100.00
2	Number	293	38,138	30,542	22,003	2,079	93,055
	Percent	0.31	40.99	32.82	23.65	2.23	100.00

TABLE 41. Igushik River daily sockeye salmon escapements, 1969.

Date	Daily Count	Accum. Count	Daily % of Total	Accum. Count
6/24	0	0	0.00	0.00
25	564	564	0.11	0.11
26	3,102	3,666	0.61	0.72
27	10,020	13,686	1.96	2.68
28	11,946	25,632	2.33	5.01
29	7,596	33,228	1.48	6.49
30	8,172	41,400	1.60	8.09
7/ 1	8,694	50,094	1.70	9.79
2	8,064	58,158	1.57	11.36
3	17,292	75,450	3.38	14.74
4	36,234	111,684	7.07	21.81
5	44,988	156,672	8.78	30.59
6	45,552	202,224	8.89	39.48
7	60,342	262,566	11.78	51.26
8	65,316	327,882	12.75	64.01
9	64,842	392,724	12.65	76.66
10	37,008	429,732	7.22	83.88
11	21,162	450,894	4.13	88.01
12	15,030	465,924	2.93	90.94
13	12,246	478,170	2.39	93.33
14	9,738	487,908	1.90	95.23
15	7,668	495,576	1.50	96.73
16	5,226	500,802	1.02	97.75
17	4,956	505,758	0.97	98.72
18	3,678	509,436	0.72	99.44
19	2,118	511,554	0.41	99.85
20	738	512,292	0.14	99.99
21	36	512,328	0.01	100.00
Total	512,328	512,328	100.00	100.00

TABLE 42 Igushik River escapement of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group				
		4 ₂	5 ₂	5 ₃	6 ₃	Total
MALES						
Sample Period						
1	Number	7,611	18,128	1,107	691	27,537
	Percent	27.64	65.83	4.02	2.51	100.00
2	Number	21,004	29,594	7,957	-	58,555
	Percent	35.87	50.54	13.59	-	100.00
3	Number	69,570	48,913	18,157	3,031	139,671
	Percent	49.81	35.02	13.00	2.17	100.00
FEMALES						
Sample Period						
1	Number	3,045	17,852	692	968	22,557
	Percent	13.50	79.14	3.07	4.29	100.00
2	Number	29,280	46,469	15,281	2,545	93,575
	Percent	31.29	49.66	16.33	2.72	100.00
3	Number	75,638	64,032	29,246	1,517	170,433
	Percent	44.38	37.57	17.16	0.89	100.00
SEXES COMBINED						
Sample Period						
1	Number	10,656	35,980	1,799	1,659	50,094
	Percent	21.27	71.83	3.59	3.31	100.00
2	Number	50,284	76,063	23,238	2,545	152,130
	Percent	33.05	50.00	15.28	1.67	100.00
3	Number	145,208	112,945	47,403	4,548	310,104
	Percent	46.83	36.42	15.29	1.46	100.00

TABLE 43. Wood River escapement sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
7/ 6	5	204	275	42.59	57.41	330,468	140,746	189,722
7/ 7	8	242	291	45.40	54.60	273,870	124,337	149,533
Total	13	443	566	43.86	56.14	604,338	265,083	339,255

TABLE 44. Nuyakuk River escapement sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
7/10	9	225	248	47.57	52.43	69,828	33,217	36,611
Total	9	225	248	47.57	52.43	69,828	33,217	36,611

TABLE 45. Nushagak-Mulchatna escapement sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Escapement	No. in Escapement	
		Males	Females	Males	Females		Males	Females
7/ 6	7	113	115	49.56	50.44	16,792	8,322	8,470
Total	7	113	115	49.56	50.44	16,792	8,322	8,470

TABLE 46. Wood River system catch and escapement of sockeye salmon, by sex, by age group, 1969.

	Age Group							
	3 ₂	4 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	Total
<u>Catch</u>								
Males:								
Number	34	1,918	117,296	-	43,727	60,941	5,220	229,136
Percent	0.01	0.84	51.19	-	19.08	26.60	2.28	100.00
Females:								
Number	-	-	84,458	-	78,965	52,343	7,135	222,901
Percent	-	-	37.89	-	35.43	23.48	3.20	100.00
Sexes combined:								
Number	34	1,918	201,754	-	122,692	113,284	12,355	452,037
Percent	0.01	0.43	44.63	-	27.14	25.06	2.73	100.00
<u>Escapement</u>								
Males:								
Number	6,694	690	111,623	510	63,611	71,992	9,963	265,083
Percent	2.52	0.26	42.11	0.19	24.00	27.16	3.76	100.00
Females:								
Number	-	-	150,953	-	69,659	112,614	6,029	339,255
Percent	-	-	44.50	-	20.53	33.19	1.78	100.00
Sexes combined:								
Number	6,694	690	262,576	510	133,270	184,606	15,992	604,338
Percent	1.11	0.11	43.45	0.08	22.05	30.55	2.65	100.00
<u>Catch and Escapement</u>								
Males:								
Number	6,728	2,608	228,919	510	107,338	132,933	15,183	494,219
Percent	1.36	0.53	46.32	0.10	21.72	26.90	3.07	100.00
Females:								
Number	-	-	235,411	-	148,624	164,957	13,164	562,156
Percent	-	-	41.88	-	26.44	29.34	2.34	100.00
Sexes combined:								
Number	6,728	2,608	464,330	510	255,962	297,890	28,347	1,056,375
Percent	0.64	0.25	43.95	0.05	24.23	28.20	2.68	100.00

TABLE 47. Wood River daily sockeye salmon escapement counts, 1969.

Date	Daily Count	Accumulative	Daily % of Total	Accum. Count
6/26	0	0	0.00	0.00
27	24	24	0.01	0.01
28	30	54	0.01	0.02
29	42	96	0.01	0.03
30	282	378	0.05	0.08
7/ 1	900	1,278	0.15	0.23
2	38,652	39,930	6.40	6.63
3	92,148	132,078	15.26	21.89
4	88,482	220,560	14.65	36.54
5	68,082	288,642	11.27	47.81
6	41,826	330,468	6.92	54.73
7	53,004	383,472	8.77	63.50
8	50,838	434,310	8.41	71.91
9	67,386	501,696	11.15	83.06
10	36,348	538,044	5.96	89.02
11	15,324	553,368	2.54	91.56
12	9,984	563,352	1.65	93.21
13	10,674	574,026	1.77	94.98
14	9,912	583,938	1.64	96.62
15	3,378	587,316	0.56	97.18
16	2,898	590,214	0.48	97.66
17	3,666	593,880	0.61	98.27
18	2,682	596,562	0.44	98.71
19	2,400	598,962	0.40	99.11
20	1,596	600,558	0.26	99.37
21	1,074	601,632	0.18	99.55
22	1,266	602,898	0.21	99.76
23	570	603,468	0.09	99.85
24	486	603,954	0.08	99.93
25	252	604,206	0.04	99.97
26	102	604,308	0.02	99.99
27	30	604,338	0.01	100.00
Total	604,338	604,338	100.00	100.00

TABLE 48. Wood River escapement of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group							
		3 ₂	4 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	Total
MALES									
Sample Period									
1	Number	2,069	690	66,925	-	33,807	32,428	4,827	140,746
	Percent	1.47	0.49	47.55	-	24.02	23.04	3.43	100.00
2	Number	4,625	-	44,699	510	29,804	39,564	5,135	124,337
	Percent	3.72	-	35.95	0.41	23.97	31.82	4.13	100.00
FEMALES									
Sample Period									
1	Number	-	-	82,093	-	41,397	60,711	5,521	189,722
	Percent	-	-	43.27	-	21.82	32.00	2.91	100.00
2	Number	-	-	68,860	-	28,262	51,903	508	149,533
	Percent	-	-	46.05	-	18.90	34.71	0.34	100.00
SEXES COMBINED									
Sample Period									
1	Number	2,069	690	149,018	-	75,204	93,139	10,348	330,468
	Percent	0.63	0.21	45.09	-	22.76	28.18	3.13	100.00
2	Number	4,625	-	113,559	510	58,066	91,467	5,643	273,870
	Percent	1.69	-	41.46	0.19	21.20	33.40	2.06	100.00

TABLE 49. Nuyakuk River system catch and escapement of sockeye salmon, by sex, by age group, 1969.

	3 ₁	4 ₁	4 ₂	Age Group 5 ₂	5 ₃	6 ₃	Total
<u>Catch</u>							
Males:							
Number	506	823	19,546	7,206	2,373	465	30,919
Percent	1.64	2.66	63.22	23.31	7.67	1.50	100.00
Females:							
Number	-	3,033	12,059	10,209	2,195	1,221	28,717
Percent	-	10.56	41.99	35.55	7.65	4.25	100.00
Sexes combined:							
Number	506	3,856	31,605	17,415	4,568	1,686	59,636
Percent	0.85	6.46	53.00	29.20	7.66	2.83	100.00
<u>Escapement</u>							
Males:							
Number	146	296	18,601	10,483	2,804	887	33,217
Percent	0.44	0.89	56.00	31.56	8.44	2.67	100.00
Females:							
Number	-	297	21,553	9,006	4,723	1,032	36,611
Percent	-	0.81	58.87	24.60	12.90	2.82	100.00
Sexes combined:							
Number	146	593	40,154	19,489	7,527	1,919	69,828
Percent	0.21	0.85	57.50	27.91	10.78	2.75	100.00
<u>Catch and Escapement</u>							
Males:							
Number	652	1,119	38,147	17,689	5,177	1,352	64,136
Percent	1.02	1.74	59.48	27.58	8.07	2.11	100.00
Females:							
Number	-	3,330	33,612	19,215	6,918	2,253	65,328
Percent	-	5.10	51.45	29.41	10.59	3.45	100.00
Sexes combined:							
Number	652	4,449	71,759	36,904	12,095	3,605	129,464
Percent	0.50	3.44	55.43	28.51	9.34	2.78	100.00

TABLE 50. Nuyakuk River daily sockeye salmon escapements, 1969.

Date	Daily Count	Accum. Count	Daily % of Total	Accum. Count
7/ 5	0	0	0.00	0.00
6	6	6	0.01	0.01
7	12	18	0.02	0.03
8	96	114	0.14	0.17
9	1,020	1,134	1.46	1.63
10	5,058	6,192	7.24	8.87
11	11,304	17,496	16.19	25.06
12	14,982	32,478	21.45	46.51
13	13,926	46,404	19.93	66.44
14	7,488	53,892	10.72	77.16
15	3,078	56,970	4.41	81.57
16	3,438	60,408	4.92	86.49
17	2,400	62,808	3.44	89.93
18	1,554	64,362	2.23	92.16
19	1,086	65,448	1.56	93.72
20	1,458	66,906	2.09	95.81
21	1,050	67,956	1.50	97.31
22	612	68,568	0.88	98.19
23	720	69,288	1.03	99.22
24	474	69,762	0.68	99.90
25	54	69,816	0.08	99.98
26	12	69,828	0.02	100.00
Total	69,828	69,828	100.00	100.00

TABLE 51. Nushagak-Mulchatna system catch and escapement of sockeye salmon, by sex, by age group, 1969.

	Age Group								
	3 ₁	3 ₂	4 ₁	4 ₂	5 ₂	5 ₃	6 ₂	6 ₃	Total
<u>Catch</u>									
Males:									
Number	763	-	1,435	5,185	1,064	624	-	154	9,225
Percent	8.27	-	15.56	56.21	11.53	6.76	-	1.67	100.00
Females:									
Number	843	-	6,026	2,184	3,423	171	-	436	13,083
Percent	6.44	-	46.06	16.69	26.17	1.31	-	3.33	100.00
Sexes combined:									
Number	1,606	-	7,461	7,369	4,487	795	-	590	22,308
Percent	7.20	-	33.45	33.03	20.11	3.56	-	2.65	100.00
<u>Escapement</u>									
Males:									
Number	220	73	516	4,934	1,547	737	-	295	8,322
Percent	2.65	0.88	6.20	59.29	18.59	8.85	-	3.54	100.00
Females:									
Number	147	-	590	3,903	3,020	368	74	368	8,470
Percent	1.74	-	6.96	46.08	35.65	4.35	0.87	4.35	100.00
Sexes combined:									
Number	367	73	1,106	8,837	4,567	1,105	74	663	16,792
Percent	2.18	0.43	6.59	52.63	27.20	6.58	0.44	3.95	100.00
<u>Catch and Escapement</u>									
Males:									
Number	983	73	1,951	10,119	2,611	1,361	-	449	17,547
Percent	5.60	0.41	11.12	57.67	14.88	7.76	-	2.56	100.00
Females:									
Number	990	-	6,616	6,087	6,443	539	74	804	21,553
Percent	4.59	-	30.70	28.24	29.90	2.50	0.34	3.73	100.00
Sexes combined:									
Number	1,973	73	8,567	16,206	9,054	1,900	74	1,253	39,100
Percent	5.04	0.19	21.91	41.45	23.16	4.86	0.19	3.20	100.00

TABLE 52. Nushagak-Mulchatna daily sockeye salmon escapements, 1969.

Date	Daily Count	Accum. Count	Daily % of Total	Accum. Count
7/ 4	0	0	0.00	0.00
5	18	18	0.02	0.02
6	3,444	3,462	3.98	4.00
7	10,674	14,136	12.32	16.32
8	10,902	25,038	12.59	28.91
9	13,764	38,802	15.89	44.80
10	15,354	54,156	17.73	62.53
11	14,976	69,132	17.28	79.81
12	8,424	77,556	9.73	89.54
13	3,906	81,462	4.51	94.05
14	2,412	83,874	2.78	96.83
15	1,548	85,422	1.79	98.62
16	366	85,788	0.42	99.04
17	174	85,962	0.20	99.24
18	258	86,220	0.30	99.54
*	400	86,620	0.46	100.00
Total	86,620	86,620	100.00	100.00

* Estimated late season escapement.

Note: Subtracting Nuyakuk River count total from the above count leaves the Nushagak-Mulchatna escapement total (86,620-69,828 = 16,792).

Togiak District

Fishing district boundaries in the Togiak district in 1969 remained unchanged from the previous year.

The pre-season initial gear registration was 125 units, drift and set net combined, up 14 units from 1968.

The fishing periods remained similar to those of 1968 with the Togiak River section open to fishing four days per week and the Kulukak, Matogak, Osviak, and Cape Pierce sections open five days per week.

The peak of the sockeye salmon district catch of 40,959 occurred during the period of July 14-19. This period catch represented 31 percent of the total season's catch. Between June 30 and July 26, over 90 percent of the season's sockeye catch, was accounted for. The fishermen-industry price dispute did not affect commercial operations in this district.

The total inshore sockeye run was composed of a commercial catch of 134,252 and a district escapement of 125,066. The total district inshore run of 259,318 was 26 percent higher than the pre-season forecast. Both the catch and escapement were above the average for the district.

The district king salmon catch of 20,181 was the largest in the history of the fishery, and was 173 percent higher than the 15-year average. The chum salmon catch of 66,389 was 25 percent lower than the 15-year average, while the late season coho salmon catch of 28,720 was the highest in the history of the fishery.

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TABLE 53. Togiak district commercial catch and escapement of sockeye salmon, by sex, by age group, 1969.

	3 ₁	4 ₁	4 ₂	4 ₃	Age Group		5 ₃	6 ₂	6 ₃	6 ₄	Total
	5 ₂										
<u>Catch</u>											
Males:											
Number	164	451	38,158	-	16,220	14,859	54	6,404	54	76,364	
Percent	0.21	0.59	49.97	-	21.24	19.46	0.07	8.39	0.07	100.00	
Females:											
Number	144	376	25,907	-	14,642	11,609	-	5,210	-	57,888	
Percent	0.25	0.65	44.76	-	25.29	20.05	-	9.00	-	100.00	
Sexes combined:											
Number	308	827	64,065	-	30,862	26,468	54	11,614	54	134,252	
Percent	0.23	0.62	47.72	-	22.99	19.71	0.04	8.65	0.04	100.00	
<u>Escapement</u>											
Males:											
Number	252	103	36,757	25	10,324	5,632	-	2,030	-	55,123	
Percent	0.46	0.19	66.68	0.05	18.73	10.22	-	3.68	-	100.00	
Females:											
Number	318	157	37,629	-	9,524	5,311	-	1,204	-	54,143	
Percent	0.59	0.29	69.50	-	17.59	9.81	-	2.22	-	100.00	
Sexes combined:											
Number	570	260	74,386	25	19,848	10,943	-	3,234	-	109,266	
Percent	0.52	0.24	68.08	0.02	18.16	10.02	-	2.96	-	100.00	
<u>Catch and Escapement</u>											
Males:											
Number	416	554	74,915	25	26,544	20,491	54	8,434	54	131,487	
Percent	0.32	0.42	56.98	0.02	20.19	15.58	0.04	6.41	0.04	100.00	
Females:											
Number	462	533	63,536	-	24,166	16,920	-	6,414	-	112,031	
Percent	0.41	0.48	56.71	-	21.57	15.10	-	5.73	-	100.00	
Sexes combined:											
Number	878	1,087	138,451	25	50,710	37,411	54	14,848	54	243,518	
Percent	0.36	0.45	56.86	0.01	20.82	15.36	0.02	6.10	0.02	100.00	

TABLE 54. Togiak district commercial catch sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Commercial Catch	No. in Catch	
		Males	Females	Males	Females		Males	Females
7/6-	14	454	274	62.36	37.64	39,210	24,451	14,759
7/7-13	5	294	213	57.99	42.01	28,503	16,529	11,974
7/14-20	4	270	219	55.21	44.79	40,959	22,614	18,345
7/21-27	4	277	214	56.42	43.58	17,298	9,760	7,538
7/28-	5	145	254	36.34	63.66	8,282	3,010	5,272
TOTAL	32	1,440	1,174	56.88	43.12	134,252	76,364	57,888

TABLE 55. Togiak River escapement, sex composition of sockeye salmon by date, 1969.

Date	No. of samples	No. in Samples		Percent		Escapement	No. in escapement	
		Males	Females	Males	Females		Males	Females
7/14	4	198	188	51.30	48.70	39,522	20,275	19,247
7/15-19	5	175	210	45.45	54.55	20,934	9,515	11,419
7/20-22	3	159	160	49.84	50.16	8,064	4,019	4,045
7/23-	18	306	279	52.31	47.69	40,746	21,314	19,432
Total	30	838	837	50.45	49.55	109,266	55,123	54,143

Table 56. Togiak District commercial catch of sockeye salmon, age group and percent by period and sex, 1969.

		Age group								
		3 1	4 1	4 2	5 2	5 3	6 2	6 3	6 4	Total
MALES										
Sample period										
1	Number	108	269	12,873	9,101	1,239	54	753	54	24,451
	Percent	0.44	1.10	52.65	37.22	5.07	0.22	3.08	0.22	100.00
2	Number	56	56	10,007	3,149	2,250	—	1,011	—	16,529
	Percent	0.34	0.34	60.54	19.05	13.61	—	6.12	—	100.00
3	Number	—	84	9,633	3,182	6,533	—	3,182	—	22,614
	Percent	—	0.37	42.60	14.07	28.89	—	14.07	—	100.00
4	Number	—	—	4,545	705	3,488	—	1,022	—	9,760
	Percent	—	—	46.57	7.22	35.74	—	10.47	—	100.00
5	Number	—	42	1,100	83	1,349	—	436	—	3,010
	Percent	—	1.38	36.55	2.76	44.83	—	14.48	—	100.00
FEMALES										
Sample period										
1	Number	53	376	6,303	7,058	646	—	323	—	14,759
	Percent	0.36	2.55	42.70	47.82	4.38	—	2.19	—	100.00
2	Number	—	—	5,620	3,542	1,406	—	1,406	—	11,974
	Percent	—	—	46.94	29.58	11.74	—	11.74	—	100.00
3	Number	—	—	7,455	3,686	4,691	—	2,513	—	18,345
	Percent	—	—	40.64	20.09	25.57	—	13.70	—	100.00
4	Number	70	—	4,474	211	2,396	—	387	—	7,538
	Percent	0.93	—	59.35	2.80	31.78	—	5.14	—	100.00
5	Number	21	—	2,055	145	2,470	—	581	—	5,272
	Percent	0.39	—	38.98	2.76	46.85	—	11.02	—	100.00

Continued

Table 56 Togiak District commercial catch of sockeye salmon, age group and percent by period and sex, 1969. (continued)

SEXES COMBINED		3 ₁	4 ₁	Age group 4 ₂		5 ₂	5 ₃	6 ₂	6 ₃	6 ₄	Total
Sample period											
69	1	Number	161	645	19,176	16,159	1,885	54	1,076	54	39,210
		Percent	0.41	1.64	48.91	41.21	4.81	0.14	2.74	0.14	100.00
	2	Number	56	56	15,627	6,691	3,656	-	2,417	-	28,503
		Percent	0.20	0.20	54.82	23.47	12.83	-	8.48	-	100.00
	3	Number	-	84	17,088	6,868	11,224	-	5,695	-	40,959
		Percent	-	0.21	41.72	16.77	27.40	-	13.90	-	100.00
	4	Number	70	-	9,019	916	5,884	-	1,409	-	17,298
		Percent	0.40	-	52.14	5.30	34.02	-	8.14	-	100.00
	5	Number	21	42	3,155	228	3,819	-	1,017	-	8,282
		Percent	0.25	0.51	38.10	2.75	46.11	-	12.28	-	100.00

TABLE 57. Togiak River daily sockeye salmon escapements, 1969.

Date	Daily Count	Accumulative	Daily % of Total	Accum. %
July 5	0	0	0.00	0.00
6	2,190	2,190	2.00	2.00
7	954	3,144	0.87	2.87
8	804	3,948	0.74	3.61
9	5,352	9,300	4.90	8.51
10	8,100	17,400	7.41	15.92
11	8,844	26,244	8.10	24.02
12	5,916	32,160	5.42	29.44
13	4,242	36,402	3.88	33.32
14	3,120	39,522	2.86	36.18
15	1,830	41,352	1.67	37.85
16	2,412	43,764	2.21	40.06
17	6,582	50,346	6.02	46.08
18	5,718	56,064	5.23	51.31
19	4,392	60,456	4.02	55.33
20	3,876	64,332	3.55	58.88
21	2,856	67,188	2.61	61.49
22	1,332	68,520	1.22	62.71
23	3,234	71,754	2.96	65.67
24	2,886	74,640	2.64	68.31
25	1,176	75,816	1.08	69.39
26	2,340	78,156	2.14	71.53
27	1,536	79,692	1.41	72.94
28	3,246	82,938	2.97	75.91
29	1,518	84,456	1.39	77.30
30	2,778	87,234	2.54	79.84
31	2,754	89,988	2.52	82.36
Aug. 1	2,976	92,964	2.72	85.08
2	2,628	95,592	2.41	87.49
3	3,546	99,138	3.25	90.74
4	2,340	101,478	2.14	92.88
5	1,644	103,122	1.50	94.38
6	1,248	104,370	1.14	95.52
7	588	104,958	0.54	96.06
8	1,200	106,158	1.10	97.16
9	582	106,740	0.53	97.69
10	1,320	108,060	1.21	98.90
11	636	108,696	0.58	99.48
12	432	109,128	0.40	99.88
13	102	109,230	0.09	99.97
14	36	109,266	0.03	100.00
Total	109,266	109,266	100.00	100.00

Table 58 Togiak River escapement of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group							
		3 ₁	4 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	
<u>MALES</u>									
Sample period									Total
1	Number	103	103	13,514	-	4,609	1,433	513	20,275
	Percent	0.51	0.51	66.65	-	22.73	7.07	2.53	100.00
2	Number	54	-	6,362	-	2,284	489	326	9,515
	Percent	0.57	-	66.86	-	24.00	5.14	3.43	100.00
3	Number	25	-	2,882	25	784	227	76	4,019
	Percent	0.63	-	71.69	0.63	19.50	5.66	1.89	100.00
4	Number	70	-	13,999	-	2,647	3,483	1,115	21,314
	Percent	0.33	-	65.68	-	12.42	16.34	5.23	100.00
<u>FEMALES</u>									
Sample period									
1	Number	-	102	11,977	-	5,734	820	614	19,247
	Percent	-	0.53	62.23	-	29.79	4.26	3.19	100.00
2	Number	108	55	8,157	-	2,012	870	217	11,419
	Percent	0.95	0.48	71.43	-	17.62	7.62	1.90	100.00
3	Number	-	-	3,009	-	455	556	25	4,045
	Percent	-	-	74.37	-	11.25	13.75	0.63	100.00
4	Number	210	-	14,487	-	1,323	3,064	348	19,432
	Percent	1.08	-	74.55	-	6.81	15.77	1.79	100.00

Continued

Table 58 Togiak River escapement sockeye salmon, age group and percent by period and sex, 1969. (continued)

SEXES COMBINED		Age group							Total
		3 1	4 1	4 2	4 3	5 2	5 3	6 3	
Sample period									
1	Number	103	205	25,491	-	10,343	2,253	1,127	39,522
	Percent	0.26	0.52	64.50	-	26.17	5.70	2.85	100.00
2	Number	162	55	14,519	-	4,296	1,359	543	20,934
	Percent	0.77	0.26	69.37	-	20.52	6.49	2.59	100.00
3	Number	25	-	5,891	25	1,239	783	101	8,064
	Percent	0.31	-	73.06	0.31	15.36	9.71	1.25	100.00
4	Number	280	-	28,486	-	3,970	6,547	1,463	40,746
	Percent	0.69	-	69.91	-	9.74	16.07	3.59	100.00

TABLE 59. Total Togiak district sockeye salmon escapement by age group, 1969.

	Age Group							Total
	3 ₁	4 ₁	4 ₂	4 ₃	5 ₂	5 ₃	6 ₃	
Togiak Tributaries ^{1/}	38	18	5,038	1	1,344	742	219	7,400
Kulukak System ^{1/}	44	21	5,718	2	1,525	842	248	8,400
Togiak River	570	260	74,386	25	19,848	10,943	3,234	109,266
TOTAL TOGIAK DISTRICT								
Number	652	299	85,142	28	22,717	12,527	3,701	125,066
Percent	0.52	0.24	68.08	0.02	18.16	10.02	2.96	100.00

^{1/} Age composition (sexes combined) of Togiak River escapement used for these systems; total number obtained from aerial surveys.

Figure 7. Map of important sockeye salmon statistical areas on north side of Alaska Peninsula, 1969.

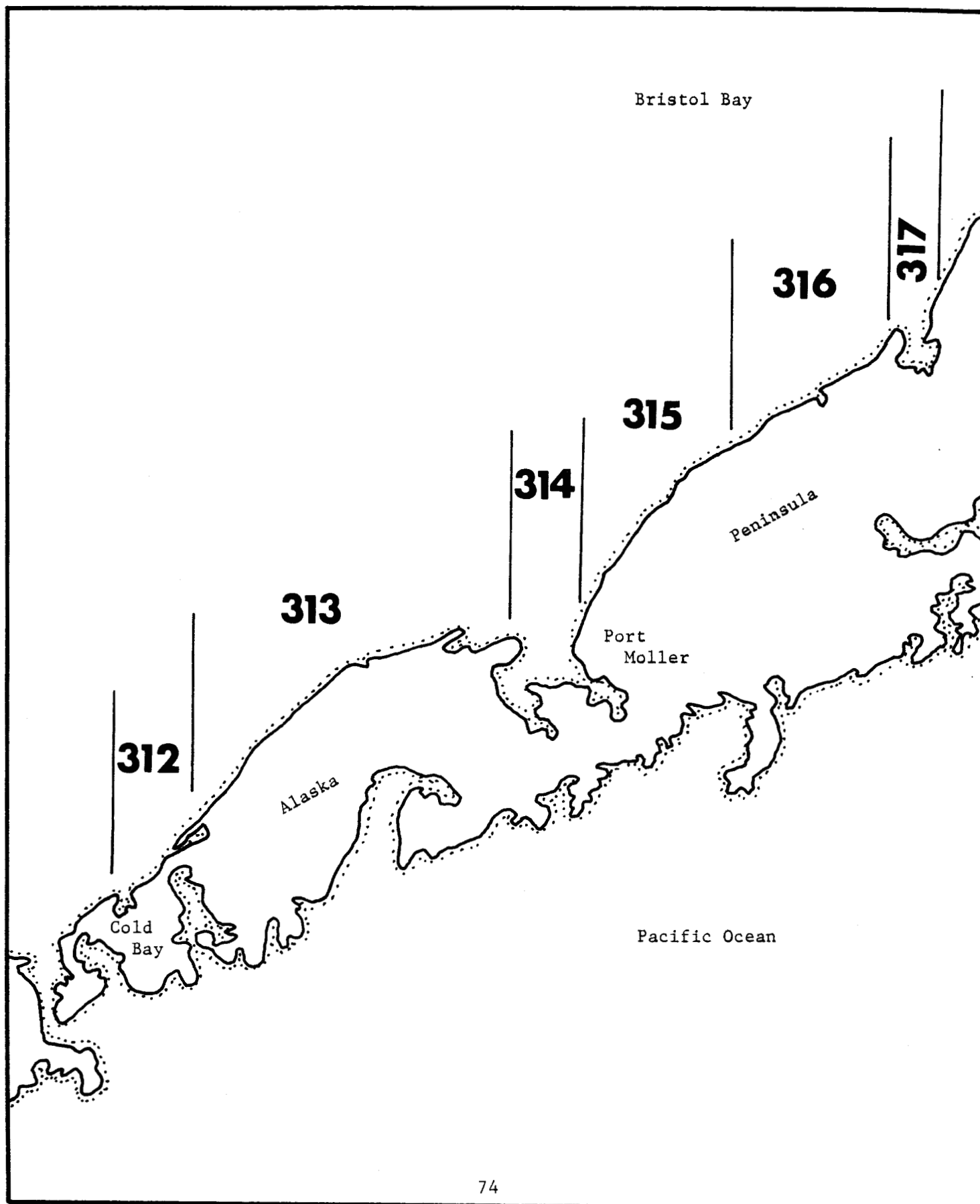


TABLE 60. South Unimak commercial catch, sex composition of sockeye salmon by date, 1969.

Date	No. of Samples	No. in Samples		Percent		Commercial Catch	No. in Catch	
		Males	Females	Males	Females		Males	Females
-6/15	5	215	165	56.58	43.42	165,274	93,512	71,762
6/16-17	4	179	152	54.08	45.92	89,329	48,309	41,020
6/18-19	3	176	169	51.01	48.99	171,711	87,590	84,121
6/20-	4	247	305	44.75	55.25	354,568	158,669	195,899
Total	16	817	791	49.70	50.30	780,882	388,080	392,802

TABLE 61. South Unimak commercial catch of sockeye salmon, age group and percent by period and sex, 1969.

		3 ₁	4 ₁	4 ₂	Age Group		6 ₃	6 ₄	7 ₄	Total
MALES					5 ₂	5 ₃				
Sample Period										
1	Number	-	-	51,319	5,218	31,317	5,218	440	-	93,512
	Percent	-	-	54.88	5.58	33.49	5.58	0.47	-	100.00
2	Number	-	-	29,686	2,159	15,652	541	-	271	48,309
	Percent	-	-	61.45	4.47	32.40	1.12	-	0.56	100.00
3	Number	499	499	53,237	3,985	25,384	2,937	999	-	87,590
	Percent	0.57	0.57	60.78	4.55	28.98	3.41	1.14	-	100.00
4	Number	635	-	104,086	5,776	44,332	3,205	635	-	158,669
	Percent	0.40	-	65.60	3.64	27.94	2.02	0.40	-	100.00
FEMALES										
76	Sample Period									
1	Number	-	-	27,126	11,812	23,193	8,755	438	438	71,762
	Percent	-	-	37.80	16.46	32.32	12.20	0.61	0.61	100.00
2	Number	-	-	22,668	5,398	11,063	1,891	-	-	41,020
	Percent	-	-	55.26	13.16	26.97	4.61	-	-	100.00
3	Number	496	-	48,286	5,476	27,373	2,490	-	-	84,121
	Percent	0.59	-	57.40	6.51	32.54	2.96	-	-	100.00
4	Number	-	1,293	121,379	8,992	57,163	7,072	-	-	195,899
	Percent	-	0.66	61.96	4.59	29.18	3.61	-	-	100.00

TABLE 62. South Unimak commercial catch of sockeye salmon, age group and percent by period, 1969.

		Age Group								
SEXES COMBINED		3 ₁	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	Total
Sample Period										
1	Number	-	-	78,445	17,030	54,510	13,973	878	438	165,274
	Percent	-	-	47.46	10.30	32.98	8.46	0.53	0.27	100.00
2	Number	-	-	52,354	7,557	26,715	2,432	-	271	89,329
	Percent	-	-	58.61	8.46	29.91	2.72	-	0.30	100.00
3	Number	995	499	101,523	9,461	52,757	5,477	999	-	171,711
	Percent	0.58	0.29	59.13	5.51	30.72	3.19	0.58	-	100.00
4	Number	635	1,293	225,465	14,768	101,495	10,277	635	-	354,568
	Percent	0.18	0.36	63.59	4.17	28.62	2.90	0.18	-	100.00

TABLE 63. South Unimak commercial catch, age composition of sockeye salmon by sex and sexes combined, 1969.

	Age Group								
	3 ₁	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	Total
Males									
Number	1,134	499	238,328	17,138	116,685	11,951	2,074	271	388,080
Percent	0.29	0.13	61.41	4.42	30.07	3.08	0.53	0.07	100.00
Females									
Number	496	1,293	219,459	31,678	118,792	20,208	438	438	392,802
Percent	0.13	0.33	55.87	8.06	30.24	5.15	0.11	0.11	100.00
Sexes combined									
Number	1,630	1,792	457,787	48,816	235,477	32,159	2,512	709	780,882
Percent	0.21	0.23	58.62	6.25	30.16	4.12	0.32	0.09	100.00

TABLE 64. False Pass-Unimak commercial catch of sockeye salmon by age group and percent, 1969. ^{1/}

		Age Group								Total
MALES		3 ₁	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	
Sample Period										
1	Number	-	-	51,319	5,218	31,317	5,218	440	-	93,512
	Percent	-	-	54.88	5.58	33.49	5.58	0.47	-	100.00
2	Number	-	-	29,686	2,159	15,652	541	-	271	48,309
	Percent	-	-	61.45	4.47	32.40	1.12	-	0.56	100.00
3	Number	499	499	53,237	3,985	25,384	2,987	999	-	87,590
	Percent	0.57	0.57	60.78	4.55	28.98	3.41	1.14	-	100.00
4	Number	635	-	104,086	5,776	44,332	3,205	635	-	158,669
	Percent	0.40	-	65.60	3.64	27.94	2.02	0.40	-	100.00
FEMALES										
Sample Period										
1	Number	-	-	27,126	11,812	23,193	8,755	438	438	71,762
	Percent	-	-	37.80	16.46	32.32	12.20	0.61	0.61	100.00
2	Number	-	-	22,668	5,398	11,063	1,891	-	-	41,020
	Percent	-	-	55.26	13.16	26.97	4.61	-	-	100.00
3	Number	496	-	48,286	5,476	27,373	2,490	-	-	84,121
	Percent	0.59	-	57.40	6.51	32.54	2.96	-	-	100.00
4	Number	-	1,293	121,379	8,992	57,163	7,072	-	-	195,899
	Percent	-	0.66	61.96	4.59	29.18	3.61	-	-	100.00

(Continued)

^{1/} Based on samples presented in South Unimak Table.

TABLE 64. (Continued)

		Age Group								Total
SEXES COMBINED		3 ₁	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	
Sample Period										
1	Number	-	-	78,445	17,030	54,510	13,973	878	438	165,274
	Percent	-	-	47.46	10.30	32.98	8.46	0.53	0.27	100.00
2	Number	-	-	52,354	7,557	26,715	2,432	-	271	89,329
	Percent	-	-	58.61	8.46	29.91	2.72	-	0.30	100.00
3	Number	995	499	101,523	9,461	52,757	5,477	999	-	171,711
	Percent	0.58	0.29	59.13	5.51	30.72	3.19	0.58	-	100.00
4	Number	635	1,293	225,465	14,768	101,495	10,277	635	-	354,568
	Percent	0.18	0.36	63.59	4.17	28.62	2.90	0.18	-	100.00

TABLE 65 False Pass-Unimak commercial catch, age composition of sockeye salmon, both sexes combined, 1969.

	Age Group								
	3 ₁	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	6 ₄	7 ₄	Total
	Percent								
Males									
Number	1,134	499	238,328	17,138	116,685	11,951	2,074	271	388,080
Percent	0.29	0.13	61.41	4.42	30.07	3.08	0.53	0.07	100.00
Females									
Number	496	1,293	219,459	31,678	118,792	20,208	438	438	392,802
Percent	0.13	0.33	55.87	8.06	30.24	5.15	0.11	0.11	100.00
Sexes combined									
Number	1,630	1,792	457,787	48,816	235,477	32,159	2,512	709	780,882
Percent	0.21	0.23	58.62	6.25	30.16	4.12	0.32	0.09	100.00

APPENDIX

Appendix Table 1. Nushagak District commercial catch sex composition of sockeye salmon by sample period, 1969.

Date	No. of samples	No. in samples		Percent		Commercial Catch	No. in catch	
		Males	Females	Males	Females		Males	Females
-7/2	5	183	178	50.69	49.31	12,090	6,128	5,962
7/3-7/5	5	204	221	48.00	52.00	363,591	174,524	189,067
7/6-	11	307	253	54.82	45.18	311,295	170,652	140,643
Total	21	694	652			686,976	351,304	335,672

Appendix Table 2. Nushagak District catch of sockeye salmon, age group and percent by period and sex, 1969.

MALES	3 ₁	3 ₂	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	Total
Sample Period								
Number	-	34	34	2,779	1,708	1,239	334	6,128
Percent	-	0.55	0.55	45.35	27.87	20.22	5.46	100.00
Number	-	-	1,710	103,510	34,225	33,369	1,710	174,524
Percent	-	-	0.98	59.31	19.61	19.12	0.98	100.00
Number	1,672	-	3,328	73,944	36,690	48,909	6,109	170,652
Percent	0.98	-	1.95	43.33	21.50	28.66	3.58	100.00
FEMALES								
Sample Period								
Number	-	-	-	1,842	2,412	1,072	636	5,962
Percent	-	-	-	30.90	40.45	17.98	10.67	100.00
Number	-	-	5,124	67,591	78,709	30,799	6,844	189,067
Percent	-	-	2.71	35.75	41.63	16.29	3.62	100.00
Number	1,111	-	5,556	56,707	35,020	38,916	3,333	140,643
Percent	0.79	-	3.95	40.32	24.90	27.67	2.37	100.00
SEXES COMBINED								
Sample Period								
Number	-	34	34	4,621	4,120	2,311	970	12,090
Percent	-	0.28	0.28	38.22	34.08	19.12	8.02	100.00
Number	-	-	6,834	171,101	112,934	64,168	8,554	363,591
Percent	-	-	1.88	47.06	31.06	17.65	2.35	100.00
Number	2,783	-	8,884	130,651	71,710	87,825	9,442	311,295
Percent	0.90	-	2.85	41.97	23.04	28.21	3.03	100.00

Appendix Table 3. Age composition of Nushagak commercial catch by sex, 1969.

	Age Group							
	31	32	41	42	52	53	63	Total
<u>MALES</u>								
Number	1,672	34	5,072	180,233	72,623	83,517	8,153	351,304
Percent	0.48	0.01	1.44	51.31	20.67	23.77	2.32	100.00
<u>FEMALES</u>								
Number	1,111	-	10,680	126,140	116,141	70,787	10,813	335,672
Percent	0.33	-	3.18	37.58	34.60	21.09	3.22	100.00
<u>SEXES COMBINED</u>								
Number	2,783	34	15,752	306,373	188,764	154,304	18,966	686,976
Percent	0.41	0.00	2.29	44.60	27.28	22.46	2.76	100.00

Appendix Table 4. Igushik beach commercial catch, sex composition of sockeye salmon by date, 1969.

Date	No. of samples	No. in samples		Percent		Commercial Catch	No. in catch	
		Males	Females	Males	Females		Males	Females
-7/8	14	433	461	48.43	51.57	51,171	24,782	26,389
7/9-	8	190	169	52.92	47.08	35,060	18,554	16,506
Total	22	623	630			86,231	43,336	42,895

Appendix Table 5. Igushik beach commercial catch of sockeye salmon, age group and percent by period and sex, 1969.

		Age Group					
MALES		4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	Total
Sample Period							
1	Number	114	10,874	6,867	6,010	917	24,782
	Percent	0.46	43.88	27.71	24.25	3.70	100.00
2	Number	195	5,761	6,347	5,859	392	18,554
	Period	1.05	31.05	34.21	31.58	2.11	100.00
FEMALES							
Sample Period							
1	Number	113	9,102	8,587	8,128	459	26,389
	Percent	0.43	34.49	32.54	30.80	1.74	100.00
2	Number	97	7,619	3,516	5,176	98	16,506
	Period	0.59	46.16	21.30	31.36	0.59	100.00
SEXES COMBINED							
Sample Period							
1	Number	227	19,976	15,454	14,138	1,376	51,171
	Percent	0.44	39.04	30.20	27.63	2.69	100.00
2	Number	292	13,380	9,863	11,035	490	35,060
	Period	0.83	38.16	28.13	31.48	1.40	100.00

Appendix Table 6. Igushik beach commercial catch, age composition by sex of sockeye salmon, 1969.

		Age Group					
	3 ₁	4 ₁	4 ₂	5 ₂	5 ₃	6 ₃	Total
<u>MALES</u>							
Number	-	309	16,635	13,214	11,869	1,309	43,336
Percent	-	0.71	38.39	30.49	27.39	3.02	100.00
<u>FEMALES</u>							
Number	-	210	16,721	12,103	13,304	557	42,895
Percent	-	0.49	38.98	28.22	31.02	1.29	100.00
<u>SEXES COMBINED</u>							
Number	-	519	33,356	25,317	25,173	1,866	86,231
Percent	-	0.60	38.68	29.36	29.19	2.17	100.00

Appendix Table 7. Average weight by age class of sockeye salmon by district, 1969.

Naknek-Kvichak District

1-Ocean			2-Ocean			3-Ocean			4-Ocean		
Age	Wt.	N	Age	Wt.	N	Age	Wt.	N	Age	Wt.	N
32	-	-	42	5.2	206	52	7.4	14	-	-	-
43	-	-	53	5.4	43	63	8.1	9	-	-	-
			64	-	-	74	-	-	-	-	-
Ave.	-	-	Ave.	5.2	249	Ave.	7.7	23	Ave.	-	-

Egegik District

1-Ocean			2-Ocean			3-Ocean			4-Ocean		
Age	Wt.	N	Age	Wt.	N	Age	Wt.	N	Age	Wt.	N
32	-	-	42	5.0	21	52	6.8	7	73	-	-
43	-	-	53	5.3	165	63	6.8	60	-	-	-
			64	6.2	5	74	6.8	3	-	-	-
Ave.	-	-	Ave.	5.3	191	Ave.	6.8	70	Ave.	-	-

Nushagak District

1-Ocean			2-Ocean			3-Ocean			4-Ocean		
Age	Wt.	N	Age	Wt.	N	Age	Wt.	N	Age	Wt.	N
32	-	-	31	-	-	41	6.8	6	51	-	-
43	-	-	42	5.1	124	52	6.5	84	62	-	-
			53	4.8	50	63	6.2	9	73	-	-
						74	-	-			
Ave.	-	-	Ave.	5.0	174	Ave.	6.5	99	Ave.	-	-

Togiak District

1-Ocean			2-Ocean			3-Ocean			4-Ocean		
Age	Wt.	N	Age	Wt.	N	Age	Wt.	N	Age	Wt.	N
32	-	-	31	-	-	41	-	-	62	-	-
			42	5.3	206	52	6.6	105			
			53	5.6	68	63	6.8	44			
						74	-	-			
Ave.	-	-	Ave.	5.4	274	Ave.	6.7	149	Ave.	-	-

Appendix Table 8. Average weight of sockeye salmon
in the commercial catch, by district,
1969.^{1/}

<u>District</u>	<u>Average Weight</u>
Naknek-Kvichak	5.4
Egegik	5.7
Nushagak	5.5
Togiak	5.8

^{1/} Average weight of fish by age group in random sample
weighted by numbers of fish in each age group in catch
irrespective of sex.

Appendix Table 9. North Peninsula catch and escapement by species and area, 1969. Numbers of fish in thousands.

Area	Commercial Catch					Total
	King	Red	Coho	Pink	Chum	
N. Unimak	--	3.3	3.4	--	1.2	7.9
Bechevin Bay	--	0.2	--	--	0.2	0.4
Area 311 Subtotal	--	3.5	3.4	--	1.4	8.3
Izembek Bay (312)	--	6.1	--	--	4.5	10.6
Nelson Lagoon (313)	2.5	72.8	34.3	--	1.5	111.1
Herendeen-Moller (314)	0.5	4.3	--	--	7.8	12.7
Bear River (315)	0.5	205.5	--	--	10.3	216.3
Ilnik (316)	--	24.0	--	--	1.3	25.3
Port Heiden (317)	1.4	5.2	11.4	--	1.2	19.2
Cinder River (318)	--	--	--	--	--	--
Total North Peninsula	4.9	321.4	49.1	--	28.0	403.3
Bristol Bay Offshore Test (350)	--	1.4	--	--	0.1	1.5

(Continued)

Appendix Table 9. North Peninsula catch and escapement by species and area, 1969. Numbers of fish in thousands (continued).

Area	Escapement					Total
	King	Red	Coho	Pink	Chum	
N. Unimak	--	36.6	1.1	--	0.5	38.2
Bechevin Bay	--	--	0.8	1.6	6.2	8.6
Area 311 Subtotal	--	36.6	1.9	1.6	6.7	46.8
Izembek Bay (312)	6.9	14.0	9.0	2.3	94.4	126.6
Nelson Lagoon (313)	9.2	77.4	11.5	--	10.2	108.3
Herendeen-Moller (314)	--	0.1	--	--	10.0	10.1
Bear River (315)	1.0	400.6	--	--	0.6	402.2
Ilnik (316)	--	1.4	1.3	--	--	2.7
Port Heiden (317)	0.8	8.9	21.6	--	--	31.3
Cinder River (318)	--	-Surveys incomplete-		--	--	2.8
		1.0	1.8			
Total North Peninsula	17.9	540.0	47.1	3.9	121.9	730.8

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